

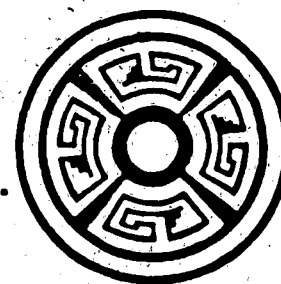
August 12, 1993

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**PHASE II/III ARCHEOLOGICAL INVESTIGATIONS  
OF THE GOTT'S COURT PARKING FACILITY,  
ANNAPOLIS, MARYLAND**

**FINAL REPORT**

**R. Christopher Goodwin & Associates, Inc.  
337 East Third Street  
Frederick, Maryland 21701**



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**PREPARED FOR:**

**City of Annapolis  
160 Duke of Gloucester Street  
Annapolis, Maryland 21401**

**VOLUME 3 OF 3**

**APPENDIX III**

**RESULTS OF FAUNAL ANALYSES**

**PROVENIENCES USED FOR FAUNAL ANALYSIS**  
**Gott's Court Site - 18AP52**

**TRENCH 11 & 11A, Excavation Units 2, 6, 23; Cellar feature with mean ceramic date of 1735.**  
**Total Bone Count: 593**

<u>FS #</u>	<u>LOCATION</u>	<u>FEATURE #</u>	<u>PROVENIENCE</u>
40	11 & 11A	1103	
69	EU 2	"	L4:98-102cmbs
81, 85	"	"	L5:102-112 cmbs
84, 96	"	"	L6:112-122 cmbs
97	"	"	L7:122-132 cmbs
98	"	"	L8:132-137 cmbs
101	"	"	L9:102-137 cmbs
102	"	"	L10:122-137 cmbs
123	EU 6	"	L4:94-105 cmbs
124	"	"	L5:105-115 cmbs
125	"	"	L6:115-125 cmbs
126, 136	"	"	L7:125-135 cmbs
127	"	"	L8:135-141 cmbs
128	"	"	L9:135-141 cmbs
121	"	"	L10:96-106 cmbs
158	"	"	L11:105-115 cmbs
159,167,168	"	"	L12:115-125 cmbs
169	"	"	L13:125-135 cmbs
161	"	"	L14:135-137 cmbs
234	EU 23	"	82-102 cmbs
235	"	"A	105-137 cmbs
239	"	"B	105-137 cmbs
236	"	"	102-129 cmbs

**TRENCH 13, Excavation Units 9, 24; Kitchen Midden feature with mean ceramic date of 1753.**  
**Total Bone Count: 182**

<u>FS #</u>	<u>LOCATION</u>	<u>FEATURE 3</u>	<u>PROVENIENCE</u>
152	EU 9	1305	93-109 cmbs
272	EU 24	1311	102-113 cmbs

PROVENIENCES USED FOR FAUNAL ANALYSIS, cont'd  
Gott's Court Site, 18AP52

TRENCH 8, Excavation Units 5 and 7; Well or privy feature with mean ceramic date of 1815.  
Total Bone Count: 906

<u>FS 3</u>	<u>LOCATION</u>	<u>FEATURE #</u>	<u>PROVENIENCE</u>
106	EU 5	0801	L1:72-82 cmbs
107	.	.,A	82-102 cmbs
191	.	.,B	82-102 cmbs
129	.	.,C	82-100 cmbs
108	.	.,C	82-92 cmbs
266	.	.,D	102-122 cmbs
212	EU 7	.,B	82-102 cmbs
285	.	.,B	154-187 cmbs
116	.	.	70-80 cmbs
131	.	.,C	80-100 cmbs
132	.	.,C	100-135 cmbs
215	.	.,D	102-122 cmbs
286	.	.,D	122-154 cmbs
295	Post-unit	.,B	115-196 cmbs
290	.	.,B	115-166 cmbs
291	.	.,B	166-196 cmbs
296(2 bags)	.	.,B	196-236 cmbs
297	.	.,B	236-266 cmbs
298	.	.,B	266-296 cmbs
292	.	.,D	115-166 cmbs
293	.	.,D	166-196 cmbs
299	.	.,D	196-208 cmbs
306	.	.,B - w1/2	L1:125-140 cmbs
300	.	.,B - w1/2	L2:140-155 cmbs
302	.	EXT. ,B - w1/2	L3:155-170 cmbs
301	.	.,B - w1/2	L3:155-170 cmbs
303	.	.,B - w1/2	L4:170-185 cmbs
304	.	.,B - w1/2	L5:185-200 cmbs
305	.	.,B - w1/2	L6:200-215 cmbs
308	.	.,B - w1/2	L8:230-245 cmbs
309	.	.,B - w1/2	L9:245-260 cmbs
311	.	EXT. ,B - w1/2	L1:260-275 cmbs

PROVENIENCES USED FOR FAUNAL ANALYSIS, (cont'd)  
Gott's Court Site, 18AP52

TRENCHES 2, 4, 5, 7 and 9, no excavation unit designations. "Gott's Court Rowhouse" level, twentieth century context date.

Total Bone Count: 414

<u>FS #</u>	<u>LOCATION</u>	<u>FEATURE #</u>	<u>PROVENIENCE</u>
2	Trench 2	Non-feature	L2:22-44 cmbs
3	"	"	L3:44-60 cmbs
9	Trench 4	"	L2:31-55 cmbs
195	" , EU14	"	L1:45-56 cmbs
11	Trench 5	"	L2:30-50 cmbs
19	Trench 7	"	L3:32-60 cmbs
48	Trench 9	"	L3:35-58 cmbs

\*\*\*\*\* TOTAL BONE COUNT FOR ALL FEATURES AND TRENCHES: 2095 \*\*\*\*\*

# Diachronic Change in Urban Foodways in Annapolis, Maryland: Faunal Remains from the Gott's Court Site

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## Introduction

This report describes the results of the analysis of faunal assemblages from four different contexts at the Gott's Court Site in Annapolis, Maryland. These four assemblages span the period from the mid-18th century to the early-20th century. As such, the faunal remains from Gott's Court offer a unique opportunity to take a detailed look at the diachronic changes taking place in diet and other aspects of urban foodways. While there are some similarities among the assemblages, there are also some important differences in the types of animals represented, the range of body parts represented, and the butchery practices.

After a brief discussion of the procedures used for the analysis, the focus shifts to an examination of the representation of different animal classes in the assemblages and the types of surface modifications observed on the bones. This is followed by a more detailed discussion of taxonomic representation, an analysis of body part representation, butchery practices, and the ages of animals at death. Finally, the results of the analysis are more broadly examined in order to draw some conclusions about diachronic changes in urban foodways.

## Procedures

The faunal assemblage studied from Gott's Court consists of many individual field samples, all of which come from four major contexts at the site. The first step in the analysis was to examine the collection of bags of material from each of the four contexts. During this preliminary examination there did not appear to be significant variation within the bags from an individual context; the types of animals and body parts represented seemed similar, as did the overall condition of the bones. The size of the sample from each context also made it impossible to subdivide the contexts into smaller components and still have meaningful sample sizes. As a result, the analysis and interpretation of the bones is all organized around four components of the total assemblage. These are the cellar deposits, the kitchen midden, the well deposits, and the rowhouse level deposits. The cellar and kitchen midden deposits date to the middle

Behrensmeyer (1978). Four different types of butchery marks were defined based on morphological characteristics. For each bone the total number of each type of butchery mark was recorded.

#### Butchery marks

cut- A straight mark on the bone that gouges the surface.

chop- A cut that removes a section of the bone.

shear- A chop going through the bone leaving a straight edge.

saw- Parallel striations caused by a toothed cutting tool.

Only a saw definitely implies the use of a different tool, as all the other marks could conceivably be made by the same tool applied with differential force or skill. For each cow, pig, sheep, or goat bone with butchery marks, the location, orientation, and type of the mark were recorded on line drawings of the different animals. These line drawings were used to reconstruct the patterns of division of specific body parts and the overall patterns of carcass apportionment.

All of the information recorded during the analysis and a more detailed description of the coding of variables is included in the catalogue appended to the end of the text.

#### **Bone modifications and taxonomic representation**

The basic composition of the four assemblages and the pattern of surface modifications observed on the bones is presented in Tables 1-4. In order to be able to make valid interassemblage comparisons, it is imperative to take a detailed look at surface modifications. The patterning of an assemblage is basically the result of three factors: the environment, the actions of assemblage formation agents, and post-depositional processes (Klein and Cruz-Urbe 1984). The central focus of archaeological studies is to be able to convincingly relate assemblage patterning to the activities of humans as agents of assemblage formation. As a result, it is important to consider how other factors besides human action structure assemblages in order to "control" for these factors when making interassemblage comparisons (Klein and Cruz-Urbe 1984).

The patterns of surface modification help provide evidence about assemblage formation processes and the actions of non-human agents. This can clearly be seen in the Gott's Court example. The degree of exposure prior to burial can be interpreted from the surface modification data, and the effects of these differences can be seen in the pattern of proportional representation of different taxonomic classes. Only three different types of surface

of the 18th century, the well deposits to the first half of the 19th century, and the rowhouse material to the early part of the 20th century. These four contexts are considered independent, and the term assemblage is used to refer to the collection from an individual context.

The material from each context was sorted by body part and taxonomic class. Analysis then proceeded to a more detailed recording of the bones of each body part. A printed spread sheet was used to record specific information about the bone fragments. Groups of less diagnostic material, such as long bone shaft, vertebral, cranial, rib and unidentified fragments, were often grouped together. Species identifications were based on a variety of written references and comparative faunal material (Ballinger and Lynch 1983; Boessneck 1970; Gilbert 1980; Olsen 1968; Prummel and Frisch 1986). Mammalian remains that could not be identified to particular genus or species were assigned to a size category.

#### Size Categories

Small. Smaller than a rabbit.

Small/ Medium. Rabbit to medium dog.

Medium. Large dog to medium pig.

Medium/ Large. Large pig to small domestic cattle.

Large. Small domestic cattle and larger.

The body part and portion represented by each fragment were recorded using a coding system modified after Gifford and Crader (1977). Whenever possible the proximal and distal fusion stages of each bone were noted, as was the side of the body from which the bone came. For cattle, pig, and caprid (sheep and goat) dentition, approximate ages were assigned based on the stage of tooth eruption and wear (Hillson 1986: 202-210, 331-336). The information on ages from dentition is included in the comments column of the attached catalogue.

A variety of different surface modifications to the bones were also recorded for all of the bones. Surface modification categories were rodent damage, carnivore damage, burning, butchery marks, and bone weathering. In addition, staining from iron and copper contact, dark discoloration, and green discoloration were observed and recorded during the analysis. Rodent and carnivore damage were recorded solely on a presence/absence basis. Burn stages were assigned to the burned bones using categories modified after Crader (1984). Bone weathering, surface decomposition caused by exposure to the elements, was recorded for each fragment based on



modifications are well represented in all four assemblages: butchery, carnivore gnawing, and bone weathering (Tab. 2).

The proportion of butchered bones increases through time, from a low of around 10% in the mid-18th-century deposits to a high of over 28% in the early-20th-century deposits. The proportion of carnivore gnawed bone is probably the best indicator of the degree of exposure of the deposits before burial. The proportion of carnivore gnawed bone is very low (just over 5%) and roughly similar for the cellar and well deposits, twice as high in the kitchen midden deposit, and more than three times as high in the rowhouse deposits. The proportion of mammal bones in each assemblage follows the same pattern as the carnivore damage; it is lowest in the cellar and well deposits, higher in the kitchen midden, and highest in the rowhouse deposits (Tab. 1). These two factors are clearly interrelated. Mammal bone tends to be the densest and survives destructive forces, such as carnivore activity, better than bone from other types of animals.

The pattern of bone surface weathering does not mesh exactly with that of carnivore gnawing. If carnivore damage is interpreted as partially reflecting the relative duration of pre-burial exposure, the amount of surface weathering should parallel the pattern of carnivore gnawing. This is generally true for the cellar, kitchen midden, and rowhouse deposits; the cellar has the lowest proportion of weathered bones, followed by the rowhouse and kitchen midden. In addition, the degree of weathering is similarly patterned (Tab. 3). More than two-thirds of the weathered cellar bones are only minimally weathered (stage 1). For the kitchen midden and rowhouse the proportion of weathered bones that are more extensively weathered (i.e. > stage 1) is much larger.

The major anomaly in terms of the extent of bone weathering is the well deposits. More bones are apparently weathered in this assemblage than in any of the others, and the extent of the weathering damage seems quite great (Tabs. 2 and 3). This seems, in fact, to be the result of non-weathering forces having acted upon the bones in fashions that mimic weathering damage. The well assemblage contained numerous bones that had become exfoliated due to the formation of mineral crystals below the surface of the bone. In addition to the 1038 fragments recorded in Table 1, there are another 488 fragments in the assemblage that are clearly small, exfoliated surface fragments (the bone equivalent of glaze spalls). These were very small, and the total pile of these fragments weighed only 98.5g. Whenever the exfoliation was clearly recognized as resulting from mineral precipitation, which seems to have been the

primary cause, the bone was not recorded as weathered. It is obvious, however, that it was not possible to always differentiate the causes of surface damage and exfoliation. As a result, the extent of apparent weathering damage to the bones in the well is disproportionately great. The extent of carnivore gnawing is undoubtedly a better reflection of the degree of surface exposure. The small proportion of carnivore gnawed bones would suggest, in fact, that the majority of the faunal material in the well layers was deposited directly into the feature with only limited pre-burial surface exposure.

The rest of the modifications to the bones are not particularly significant. Few of the bones in any of the assemblages are burned (Tab. 4). One of the most surprising aspects of the patterns of bone modification is the extremely small number of rodent gnawed bones in any of the assemblages. Rats and other rodents are also poorly represented in the assemblages (Tab. 5). In the localized area of this site there is no good evidence for rodent activity, even though food refuse was clearly being disposed of in accessible deposits. The evidence of carnivore gnawing on the bones, and the presence of cat bones in three of the four assemblages (Tab. 5) might help to explain the absence of significant signs of rodent gnawing.

Taxonomic representation is broken down in more detail in Table 5. The assemblages are all dominated by the remains of domestic mammals, namely cattle, pigs, sheep or goats, and unspecified remains of medium to large mammals. The unspecified medium to large mammal bones are mostly longbone shaft and vertebral fragments (Tab. 6); these very likely come from the primary domestic mammals. All of the caprid bones that could positively be identified are sheep bones.

No attempt was made to determine the amount of meat represented or the specific dietary contribution of the different domestic mammals. However, general aspects of the relative representation are apparent. In all of the assemblages the number of caprid bones is significantly smaller than the number of either pig or cattle bones. In the earliest deposits, the kitchen midden and cellar, the number of bone fragments and individuals is roughly comparable for pigs and cattle. In the well, the number of cattle bones is much larger than the number of pig bones, even though the number of individuals is the same. Finally, in the rowhouse assemblage, the numbers of pig bone fragments and individuals is much larger than the equivalent numbers for cattle.

Although it is possible to recognize this pattern, it is not really possible to determine its meaning, especially in terms of changes in

the overall diet. It is tempting to see these changes as reflecting significant dietary variation. Unfortunately, the relationship between faunal remains and the overall meat component of the diet is not directly discernible due to a variety of different factors, including the potential for seasonal variation in the diet, and the use of boneless cuts of meat (Bowen 1990; Henn 1985). These problems cannot be overcome, but a detailed look at body part representation does help to clarify the perceived patterns of taxonomic representation. In particular, the body part representation in the rowhouse assemblage does seem indicative of a shift towards a diet that emphasizes pork to a much greater degree.

Wild mammals are very poorly represented in all of the assemblages. There is a single deer tibia and an unidentified rodent bone in the well assemblage, and a single rabbit bone and three rodent bones in the rowhouse assemblage. The rabbit bone had clear butchery marks on it, supporting the interpretation that it was eaten, but it is not clear if the other wild mammals were consumed.

Bird bones are a relatively small component of the assemblages, and domestic (or presumably domestic) forms predominate. Chicken is the best represented bird overall, followed by turkey, duck and goose. Wild birds are also represented. Wild duck bones are present in both the cellar and well assemblages. The cellar also includes some pigeon bones, while the well includes a portion of a crow skull. It appears that the diversity of birds tends to decrease through time; only chicken and turkey were identified in the rowhouse assemblage. It is possible, however, that this is the result of differences in the taxonomic histories of the assemblage.

Fish are not well represented in any of the assemblages, and no real attempt was made to identify the fish bones. There do not seem to be repeats of any fish body parts in any of the assemblages. Both the cellar and well assemblage contained what was clearly a mixture of cranial and post-cranial elements. It is likely that the overall representation of fish bones has been strongly affected by the destructive forces operating on the assemblages; fish bones seem to be easily destroyed. The highest proportion of fish bones is in the cellar assemblage and the lowest proportion is in rowhouse.

One of the interesting features of the well assemblage is the presence of a large number of turtle carapace and plastron fragments. The nine fragments (4 individuals) identified as probable diamondback terrapin were all fragments of the plastron where it connects to the carapace. The other 68 unspecified turtle fragments are all small pieces of plastron and carapace; although these were not identified there is no indication that more than one type of turtle is

present. These turtles were undoubtedly eaten; two of the diamondback terrapin plastron fragments had obvious cut marks across the area where it joined to the carapace. It is not clear if the turtle represented in the cellar assemblage was also consumed, but it is possible.

### **Body part representation and butchery patterns**

Body part representation for cattle, pigs, caprids and unspecified medium to large mammals is shown in Table 6 and in Figures 1-3. One of the interesting facets of the pattern is the diachronic change that can be seen in the representation of cattle and caprid heads and feet; these carcass portions are present in both the 18th- and 19th-century contexts, but not in the early-20th-century rowhouse deposits. This might reflect the trend through time towards an increasing amount of butchery taking place outside the household, and a related change in the range of carcass parts brought into the household.

Further insight into the interassemblage differences in the patterns of body part representation can be gained by looking at the adjusted frequency graphs (Figs. 1-3). Since the kitchen midden deposit is so small, and is contemporaneous with the cellar deposit, it was combined with the cellar deposit for the body part representation figures. These graphs facilitate interassemblage comparisons of body part representation by standardizing for both the normal anatomical proportions of an animal and for sample size; an assemblage that had all body parts represented in normal anatomical proportions would appear on this graph as a flat line. The peaks on the graph reflect body parts that are very well represented. Butchery marks observed on the bones are also presented in Figures 4-6. It is useful to consider aspects of butchery patterns and body part representation together because they are clearly interrelated.

Starting with the cattle body part representation, in the 18th-century deposits there are a small number of parts that are clearly very well represented. The best represented area is clearly the upper hind limb, specifically the innominate and femur, and including the tibia. These parts are followed by the humerus, metacarpal, and metatarsal, all of which are moderately well represented. Beyond this there is an array of other parts, none of which are well represented. The metapodials and phalanges present seem to be the result of preparing some type of dish from the foot. This is clearly seen in the location of butchery marks; the 18th-century deposits had a number of cattle metapodials and phalanges with butchery marks on them (Fig. 4). Beyond this it is difficult to

Table 6. Body part representation for the primary mammalian taxa by numbers of fragments.

Body part	CELLAR						KITCHEN MIDDEN						WELL						ROWHOUSE					
	Bt	Ss	O/C	M	ML	L	Bt	Ss	O/C	M	ML	L	Bt	Ss	O/C	M	ML	L	Bt	Ss	O/C	M	ML	L
cranium	3	2	-	26	8	4	-	-	-	-	-	-	-	3	1	2	-	-	-	-	-	-	-	-
max. w/teeth	1	4	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-
dentary	-	-	-	-	-	-	1	-	1	-	-	-	18	9	1	1	-	-	-	2	-	-	2	-
loose teeth	3	10	1	-	-	-	2	-	1	-	-	-	2	27	-	-	-	-	1	3	-	-	-	-
atlas	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
axis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
other cervical	2	-	-	-	-	-	-	2	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
thoracic	4	3	2	1	-	-	-	-	-	1	-	-	1	-	-	2	-	-	5	-	-	1	-	-
lumbar	-	2	-	3	-	-	4	-	-	1	-	-	8	-	-	-	-	-	5	1	-	-	-	-
sacrum	3	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1	-	-	-	-	-
caudal	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
uncertain vert	-	-	-	5	-	8	-	-	-	-	2	-	-	-	-	3	-	6	-	-	-	4	2	7
rib	-	-	-	13	4	9	-	3	-	3	3	-	-	8	-	9	11	65	37	16	-	14	8	-
scapula	1	1	1	5	1	-	-	2	1	-	-	-	6	2	1	5	2	2	3	4	2	1	-	-
humerus	2	2	1	-	-	-	1	2	1	-	-	-	7	4	2	-	-	-	3	30	4	-	-	-
radius	-	2	5	-	-	-	-	-	-	-	-	-	7	2	4	-	-	-	3	3	1	-	-	-
ulna	1	1	-	-	-	-	-	-	1	-	-	-	4	1	-	-	-	-	2	3	-	-	-	-
carpal	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
metacarpal	3	3	-	-	-	-	-	1	-	-	-	-	4	1	1	-	-	-	-	6	-	-	-	-
first phalanx	3	1	3	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-
second phalanx	1	-	2	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
third phalanx	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
innominate	6	-	-	-	-	-	1	2	-	-	-	-	14	10	-	-	-	4	1	1	4	-	-	-
femur	4	2	1	-	-	-	1	-	1	-	-	-	15	4	1	-	-	-	-	7	5	1	1	-
patella	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-
tibia	2	2	1	1	-	-	1	2	-	-	-	-	12	-	4	-	-	-	3	2	3	-	-	-
fibula	-	2	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
tarsal	3	2	-	-	-	-	1	1	-	-	-	-	8	1	1	-	-	-	-	2	-	-	-	-
metatarsal	2	2	-	-	-	-	1	1	-	-	-	-	1	-	1	-	-	-	-	4	1	-	-	-
long bone/other	-	2	-	58	3	11	-	-	-	16	-	5	3	1	-	112	6	36	-	2	-	69	8	9

From left to right the columns are cow, pig, sheep and goat, medium, medium-large, and large mammal.

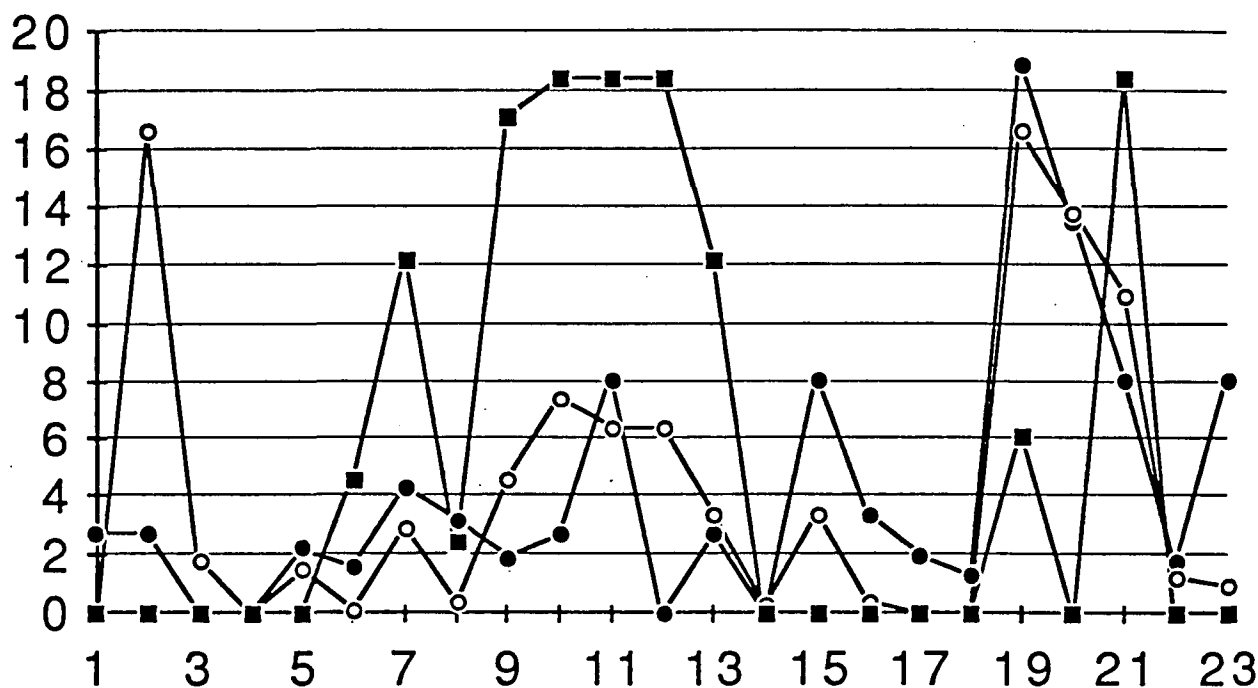


Figure 1. Cattle body part representation.\*

- -cellar and kitchen midden combined
- -well
- -rowhouse.

Body parts are as follows: 1) maxilla with teeth, 2) dentary, 3) atlas, 4) axis, 5) other cervical, 6) thoracic, 7) lumbar, 8) sacral, 9) rib, 10) scapula, 11) humerus, 12) radius, 13) ulna, 14) carpal, 15) metacarpal, 16) first phalanx, 17) second phalanx, 18) third phalanx, 19) innominate, 20) femur, 21) tibia, 22) tarsal, 23) metatarsal.

\* These percentages were calculated by dividing the number of fragments of a particular body part by the number of those parts in a single animal carcass, and expressing the resultant adjusted frequency as a percentage of the summed total for all the parts of a single type of animal.

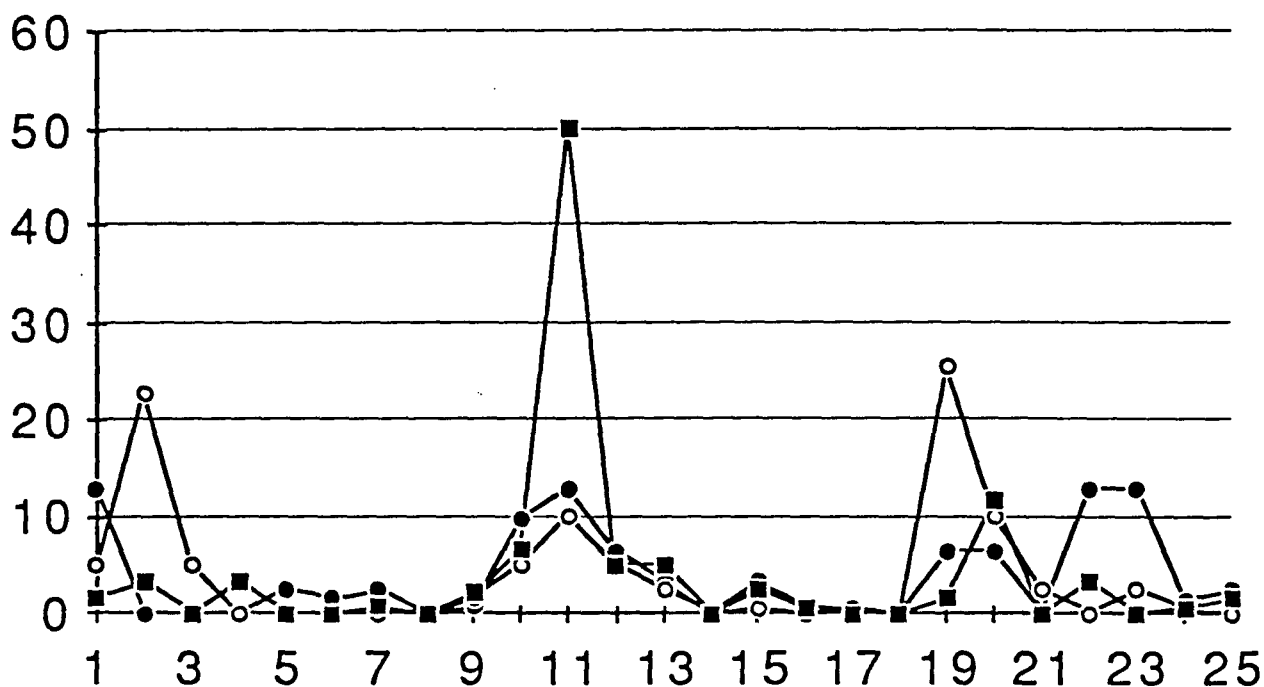


Figure 2. Pig body part representation.\*

- -cellar and kitchen midden combined
- -well
- -rowhouse.

Body parts are as follows: 1) maxilla with teeth, 2) dentary, 3) atlas, 4) axis, 5) other cervical, 6) thoracic, 7) lumbar, 8) sacral, 9) rib, 10) scapula, 11) humerus, 12) radius, 13) ulna, 14) carpal, 15) metacarpal, 16) first phalanx, 17) second phalanx, 18) third phalanx, 19) innominate, 20) femur, 21) patella, 22) tibia, 23) fibula, 24) tarsal, 25) metatarsal.

\* These percentages were calculated by dividing the number of fragments of a particular body part by the number of those parts in a single animal carcass, and expressing the resultant adjusted frequency as a percentage of the summed total for all the parts of a single type of animal.

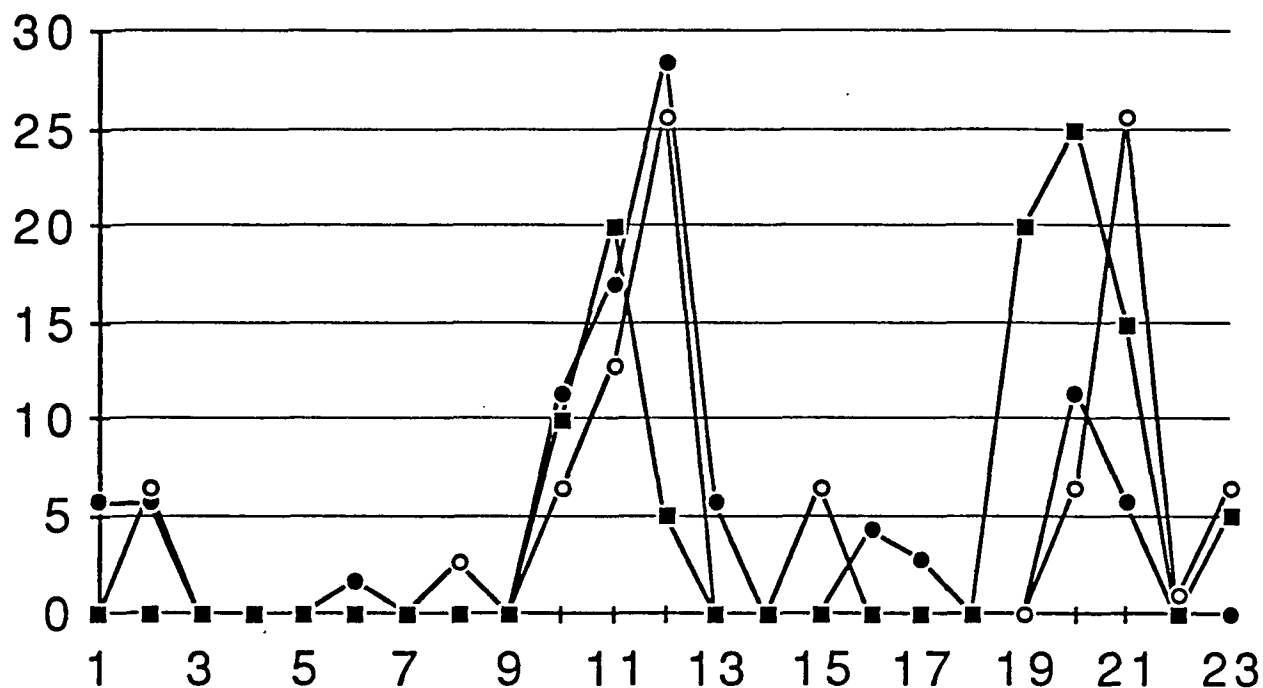


Figure 3. Caprid body part representation.\*

- -cellar and kitchen midden combined
- -well
- -rowhouse.

Body parts are as follows: 1) maxilla with teeth, 2) dentary, 3) atlas, 4) axis, 5) other cervical, 6) thoracic, 7) lumbar, 8) sacral, 9) rib, 10) scapula, 11) humerus, 12) radius, 13) ulna, 14) carpal, 15) metacarpal, 16) first phalanx, 17) second phalanx, 18) third phalanx, 19) innominate, 20) femur, 21) tibia, 22) tarsal, 23) metatarsal.

\* These percentages were calculated by dividing the number of fragments of a particular body part by the number of those parts in a single animal carcass, and expressing the resultant adjusted frequency as a percentage of the summed total for all the parts of a single type of animal.



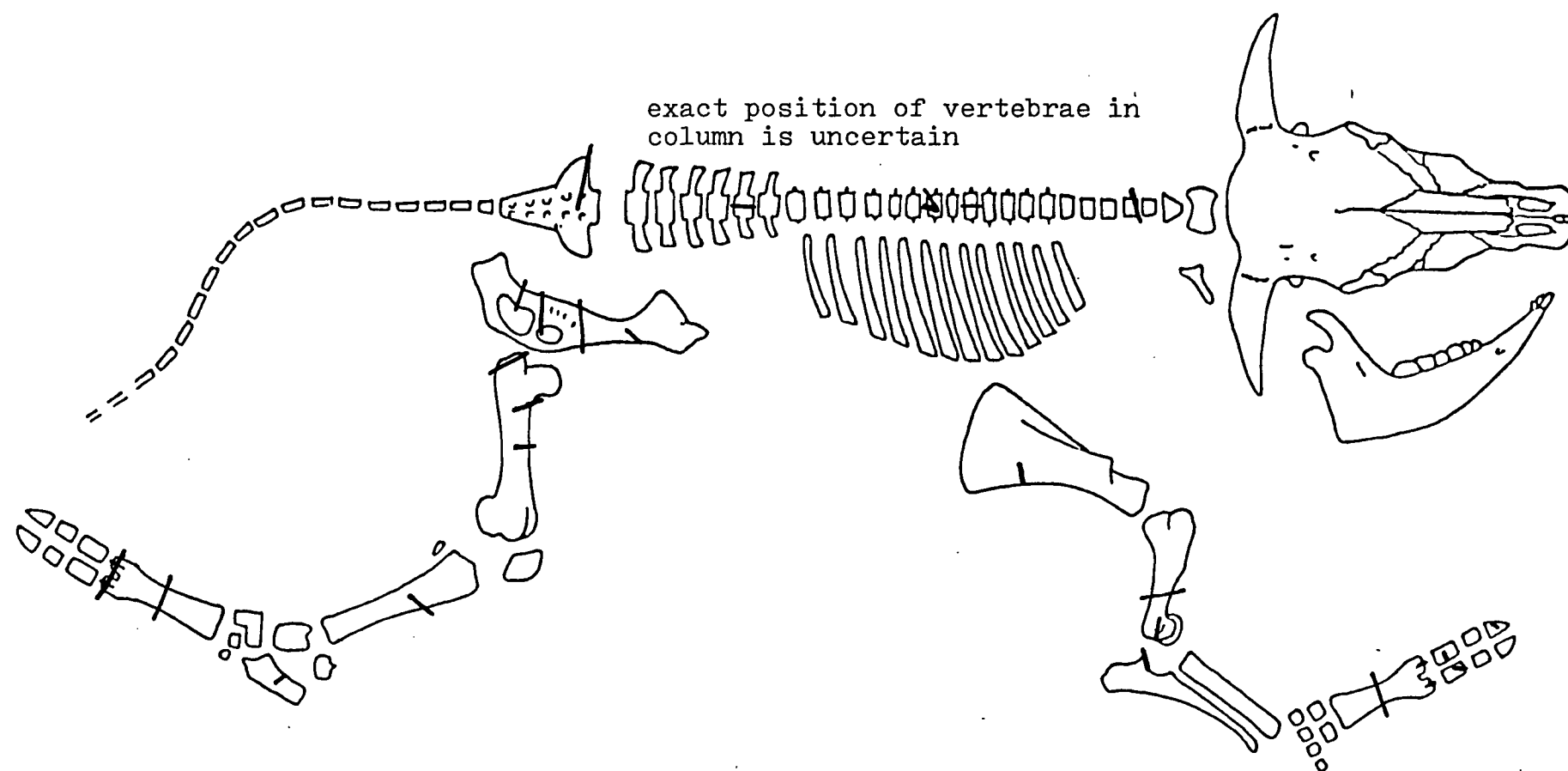


Figure 4. Chop and shear marks on cattle bones in the cellar and kitchen midden assemblages.

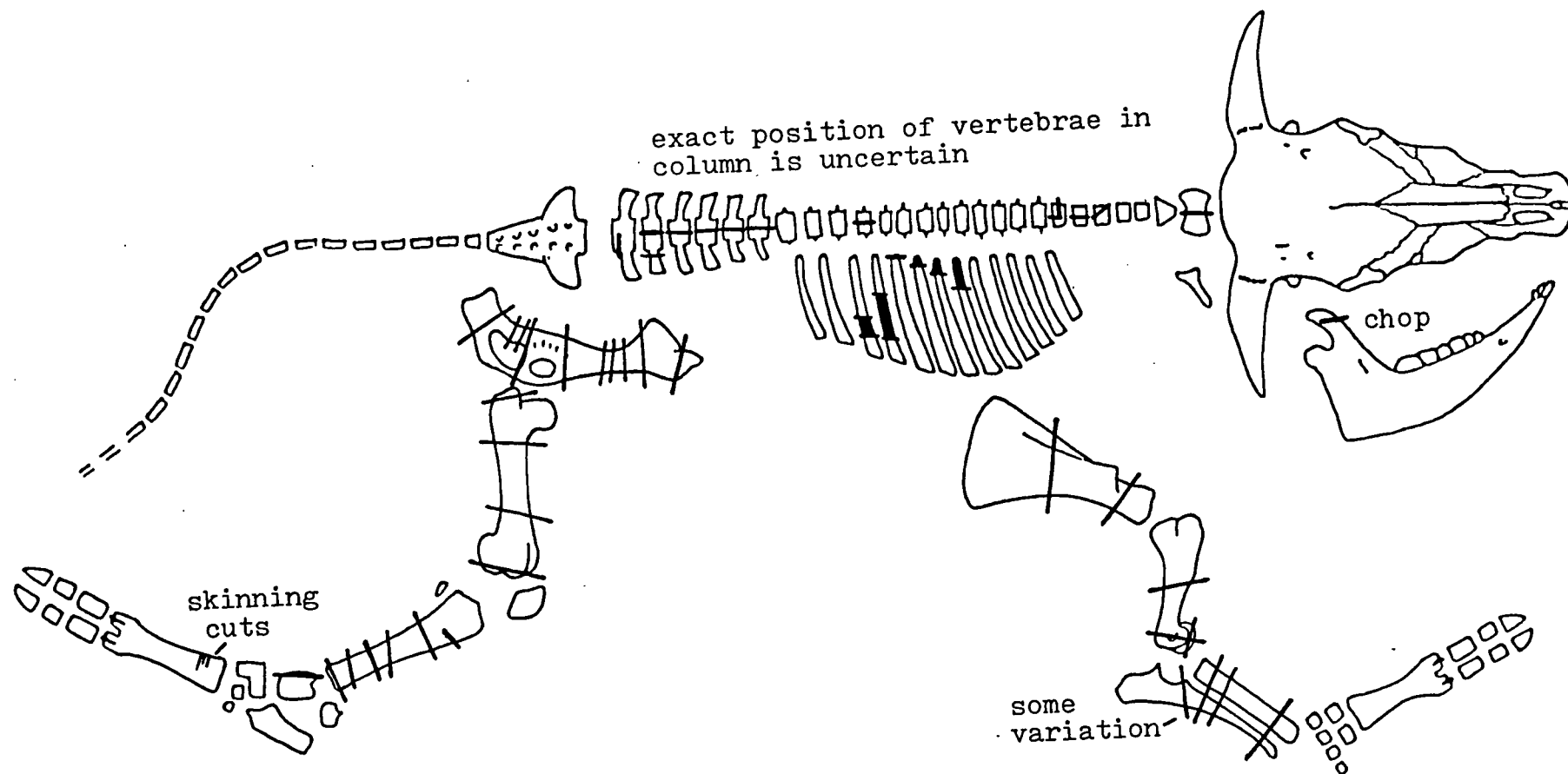


Figure 5. Butchery marks on cattle bones in the well assemblage. Unless noted all are shear or saw marks.

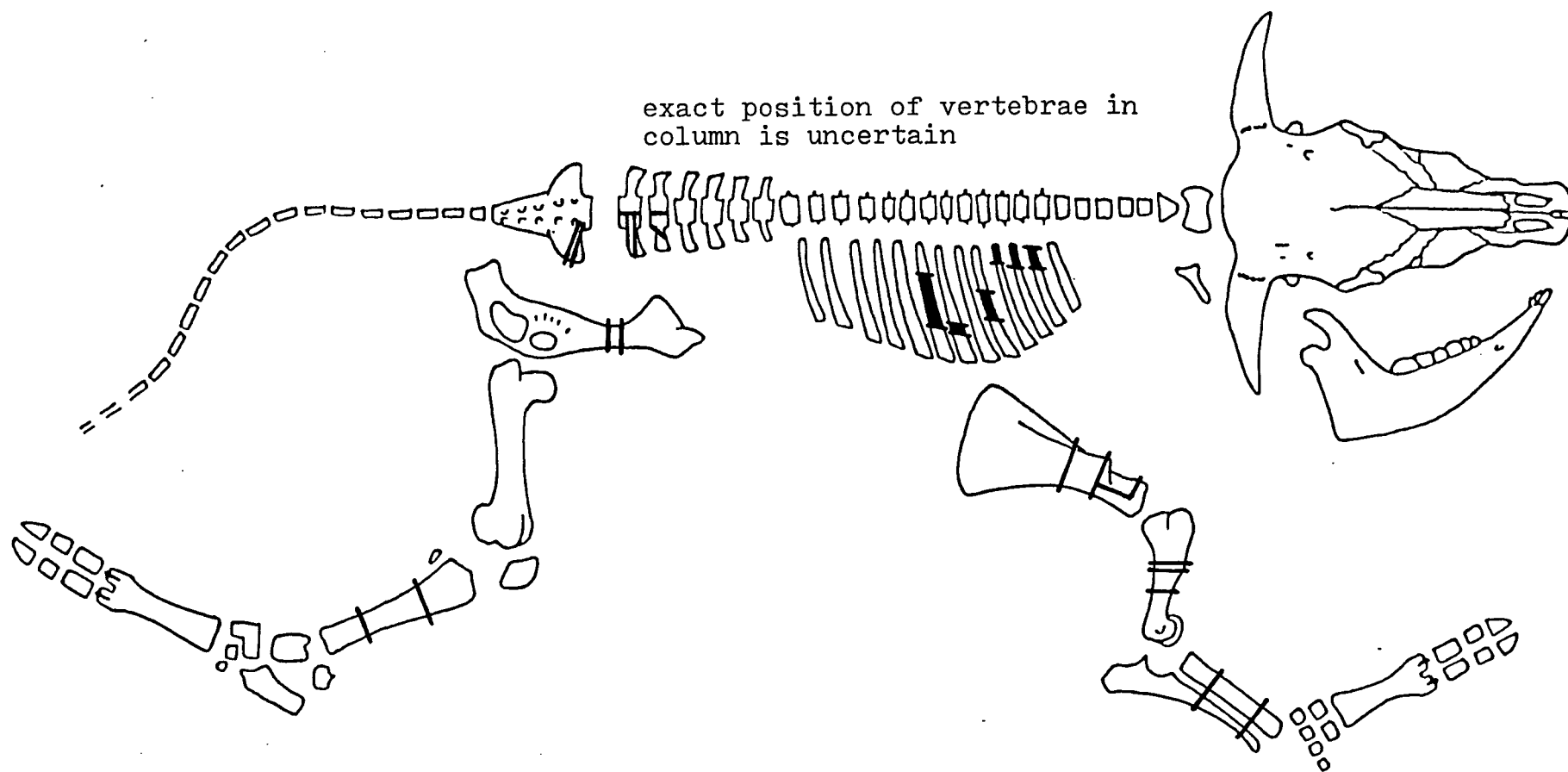


Figure 6. Shear and saw marks on cattle bones in the rowhouse assemblage.

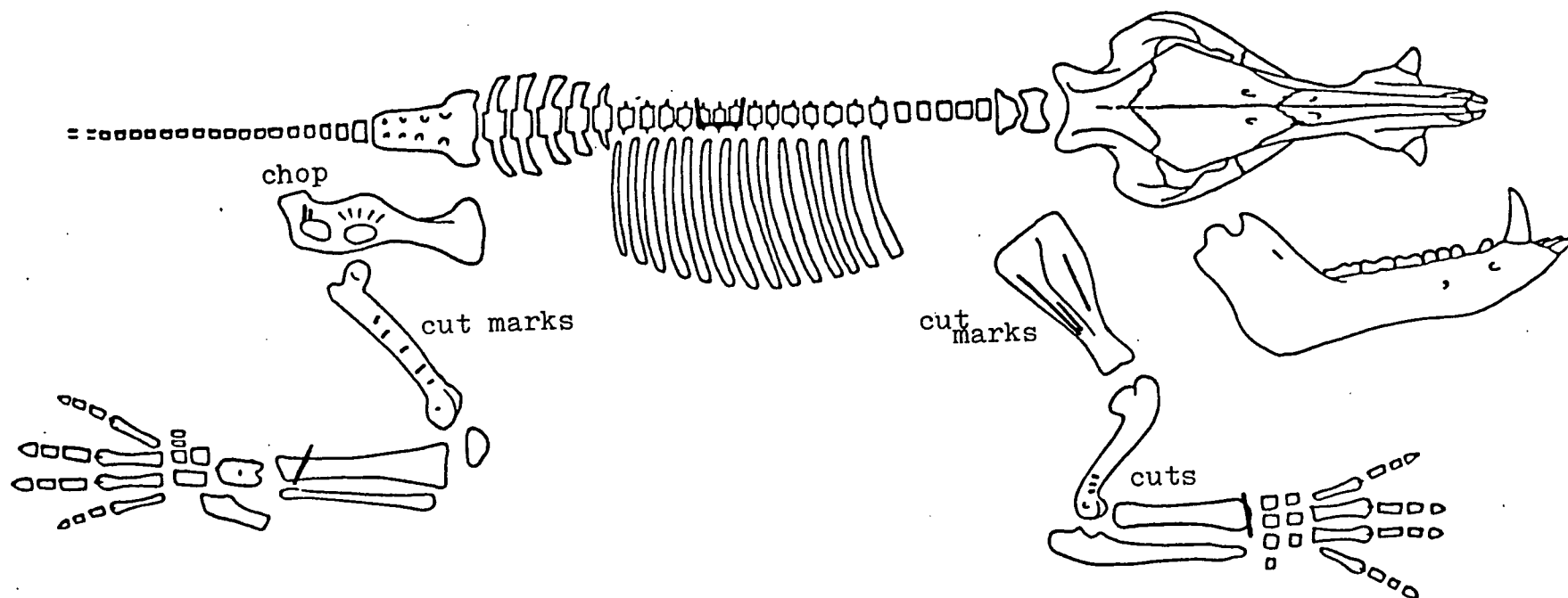


Figure 7. Butchery marks on pig bones in the cellar and kitchen midden assemblages.  
Undesignated marks are shears.

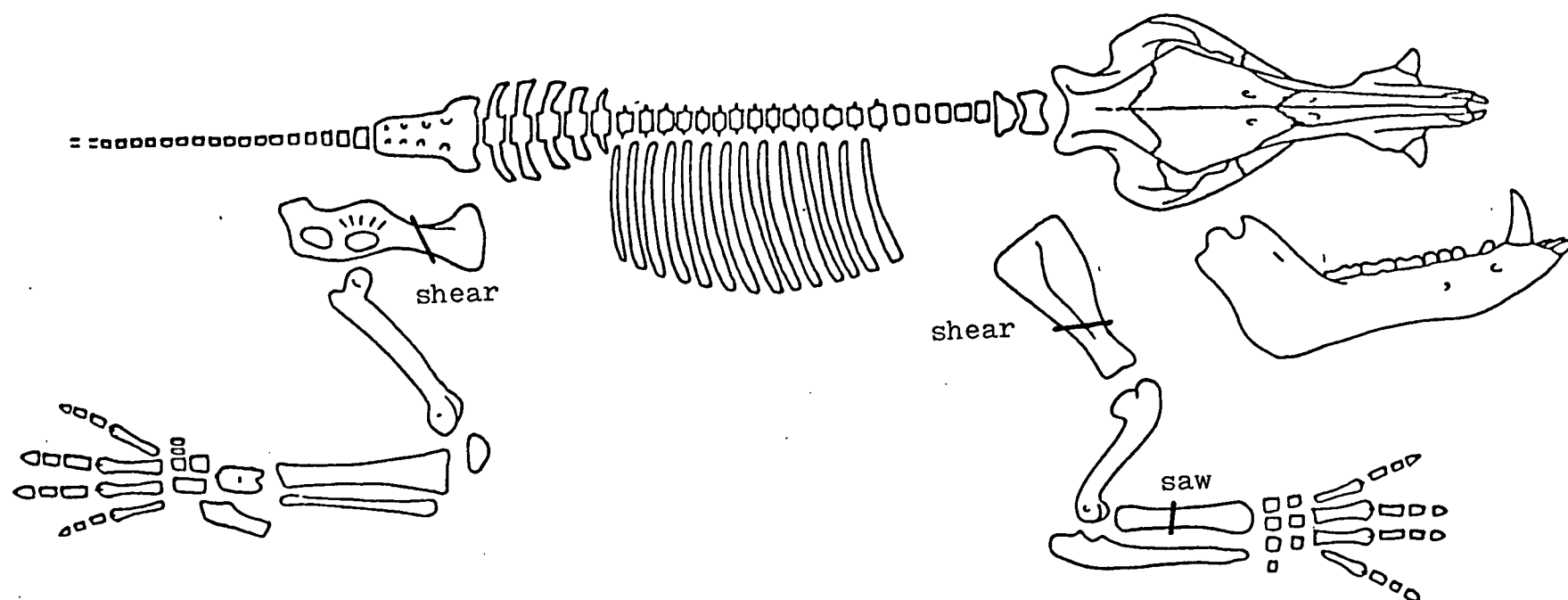


Figure 8. Butchery marks on pig bones in the well assemblage.

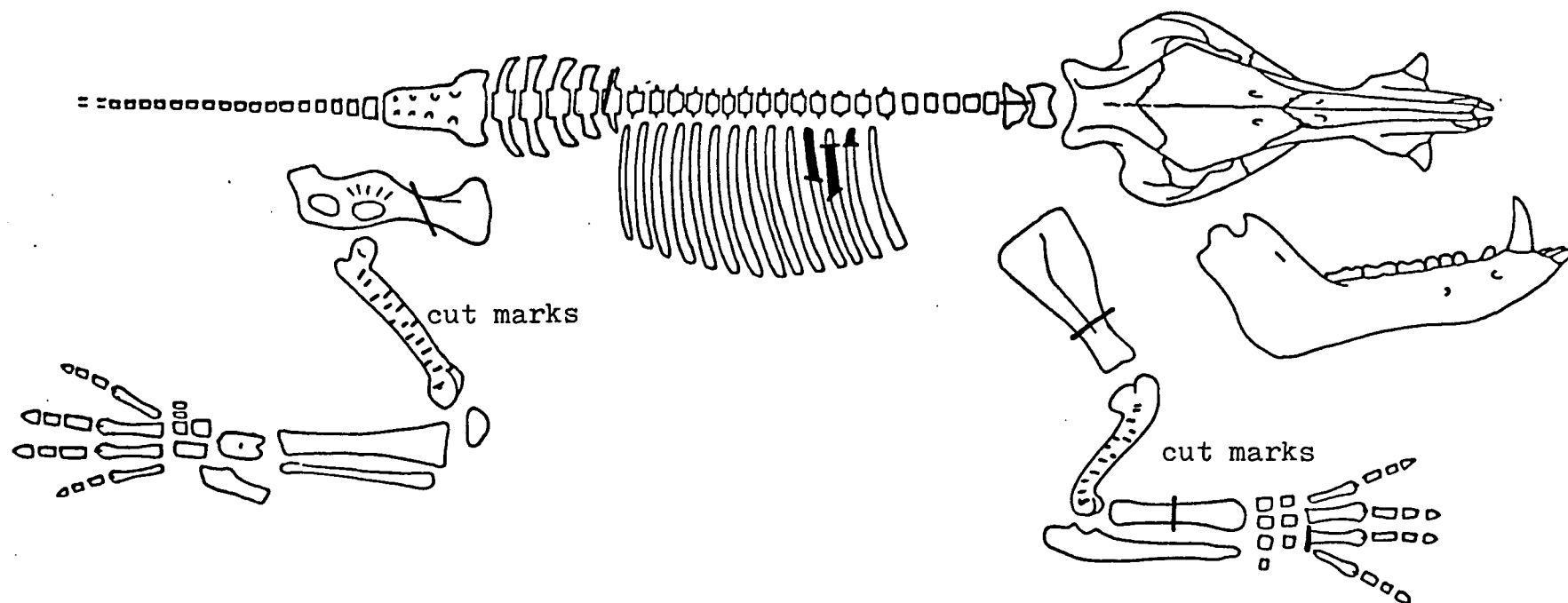


Figure 9. Butchery marks on pig bones in the rowhouse assemblage. Undesignated marks are shear and saw marks.

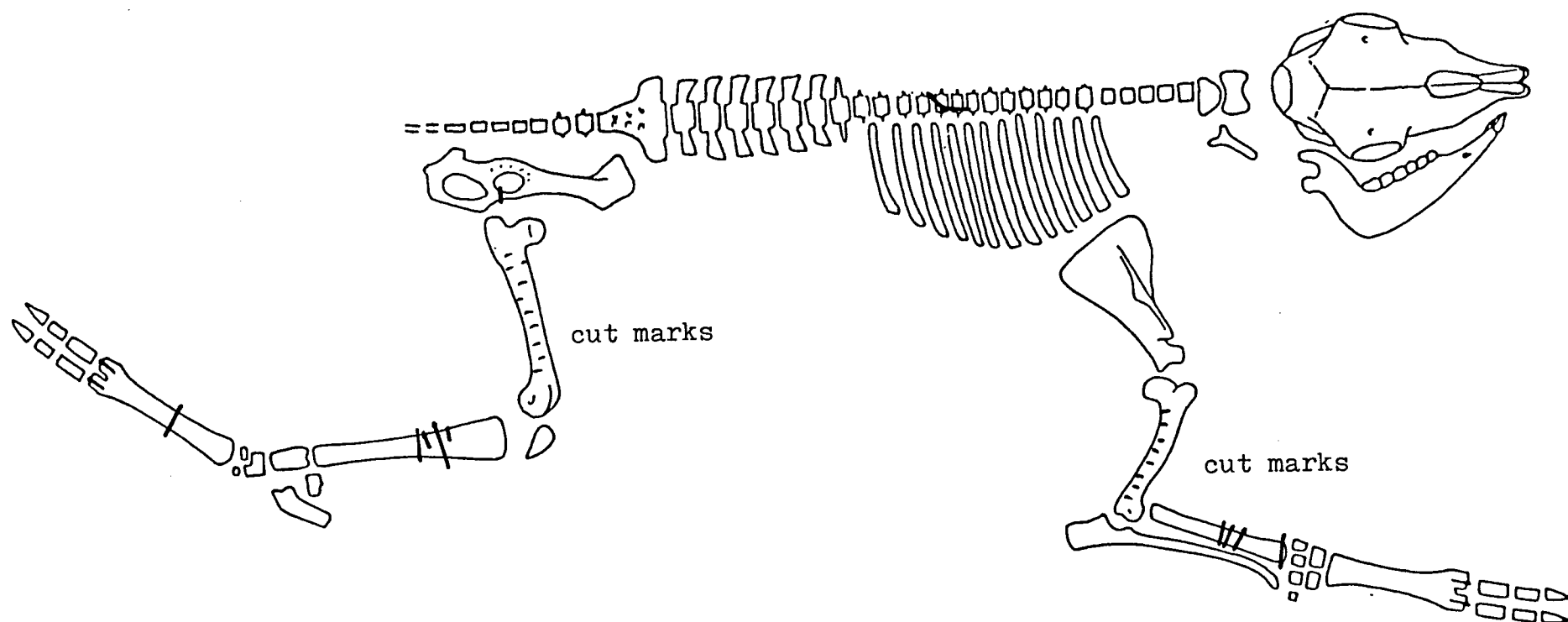


Figure 10. Butchery marks on sheep and goat bones, all assemblages combined.  
Undesignated marks are chop, shear, and saw marks.

conclude much more from the body part representation pattern because of the small number of cattle parts.

The well has a much larger number of cattle bones, and the body part representation pattern is similar in some ways to that of the combined cellar/kitchen midden. The single best represented area is the upper hind limb, made up of the innominate, femur, and tibia. The head, specifically the dentary, is the next best represented part, followed by the upper fore limb. One of the jaw fragments had a chop mark across the coronoid process, suggesting that some purposeful use of the jaw meat might be reflected. Metapodials and phalanges are distinctly less well represented than in the 18th-century deposits, perhaps reflecting an increase in the purchase of specific and discrete butchered portions of beef. This is clearly represented in the changes in the types of butchery marks and in the types of cuts represented (Tab. 7, Fig. 5). Many of the cattle bones in the well assemblage were sawn, and many of the portions created were very uniform and discrete. A good example of this is thin steaks created by sawing across the ilium.

Table 7. Butchery mark occurrences by type.

Mark type	Cellar		Kitchen Midden		Well		Rowhouse	
	N	%	N	%	N	%	N	%
Cut	51	47.2	28	66.7	105	42.3	151	53.4
Chop	17	15.7	6	14.3	11	4.4	4	1.4
Shear	39	36.1	8	19.0	24	9.7	23	8.1
Saw	1	0.9	0	-	108	43.5	105	37.1
TOTAL	108	99.9	42	100.0	248	99.9	283	100.0

The cattle body part representation in the 18th- and 19th-century deposits is somewhat similar. The upper hind limb and upper forelimb are well represented, as are some extremity portions. The early-20th-century rowhouse assemblage is strikingly different. There are only a small number of cattle bones, but the pattern of parts represented is very interesting. Bones of the upper fore limb, the scapula, humerus, radius, and ulna, are the best represented. The tibia is also well represented, followed by lumbar vertebrae. There are relatively few fragments from other parts of the body. The butchery patterns suggest that these are commercially prepared cuts; many of the bones are clearly sawn into relatively standardized portions. The clear representation of only a small number of relatively meaty parts also supports the idea of market purchase.

The pattern of differential butchery and representation of skeletal parts in the rowhouse assemblage is particularly interesting



in terms of the relative costs and cost-efficiency of different parts of the carcass (Huelsbeck 1989; Landon 1987; Lyman 1987; Schulz and Gust 1983). Two different type of cuts are represented in the cattle butchery patterns, relatively thick roast type cuts and relatively thin steak type cuts. The cuts that are expensive and cost-inefficient are all represented by thin steak cuts, while the relatively less expensive, more cost-efficient cuts are represented by much thicker roasts. In particular, the very discrete cross-cut sections of the ilium, sacrum, and lumbar vertebrae all very expensive portions of the carcass. By contrast, the thick cuts of the tibia, scapula, humerus, and radio-ulna are all relatively less expensive cuts. Further, the tibia and radio-ulna fragments come from the most cost-efficient portions of the carcass. To the extent that the faunal remains reflect overall meat purchasing patterns, this type of combined butchery and body part representation information suggests a beef purchasing pattern that emphasizes inexpensive, cost-efficient cuts for the bulk of the beef in the diet, and occasionally the inclusion of small steaks from more expensive, less cost-efficient cuts.

By contrast, a larger proportion of the cattle parts represented in the well assemblage are from relatively expensive cuts of moderate to low cost-efficiency. In particular, numerous innominate fragments, both rump and sirloin portion, as well as the many femur cuts, which represent round portions, are all relatively expensive and cost-inefficient. The body part representation in the well assemblage does, however, exhibit some variation. In particular, there are a number of hindshank and foreshank portions, represented by tibia as well as distal humerus and radio-ulna fragments. These portions are much less expensive, and much more cost-efficient. Even though there is variation in the well assemblage the differences from the rowhouse assemblage remain strikingly clear; the well assemblage as a whole contains a much larger proportion of bones from expensive cuts.

Several other aspects of cattle butchery practices can be seen (Figs. 4-6), but it is difficult to gain a truly comprehensive picture due to limitations in the sample size. Certain decisions about the butchery of cattle carcasses appear to have remained remarkably stable throughout the periods represented. The best example of this is the division through the shaft of the humerus just distal of the middle; the distal humerus portion this creates is represented in all three time periods. There also seems to be some continuity between the 18th-century practices and the early-19th-century practices in the division of the pelvis and the femur. There are also some similarities in the patterns represented in the well and rowhouse

deposits; some of the same cuts of the ilium, tibia, and radio-ulna are represented in both assemblages. It is extremely difficult to get an accurate image of patterns of apportionment of the rib cage, but similar portions created by sawing across the rib row are present in both assemblages. The major difference overall seems to be a trend through time towards more standardized and discrete cuts being created. This is demonstrated, for example, by the difference between the scapula cuts in the well and rowhouse assemblages.

Pig butchery and body part representation patterns are much more consistent and stable through the three assemblages and are thus much easier to interpret (Figs. 2, 7-9). Some pig cranial bones are present in all of the assemblages, and jaw fragments of pigs are particularly well represented in the well. Aside from the head, there are only two regions of the skeleton that are well represented: the upper fore limb and the upper hind limb, or in terms of the cuts, the shoulder and ham. Throughout the 19th century, the ham was consistently more expensive than the shoulder (Landon 1987: 133). Since both of these cuts were relatively high-yield, it is probably safe to say that the shoulder was much more cost-efficient than the ham.

In the combined cellar and kitchen midden deposits the shoulder and ham bones are about evenly represented. This contrasts fairly markedly with the other two assemblages. In the well deposit, the ham was much better represented than the shoulder. The most strikingly different pattern, however, is offered by the rowhouse. More than any other assemblage, the rowhouse is clearly dominated by pig bones from exclusively the shoulder and ham. The vast majority of these are humerus fragments, the central bone of the shoulder cut. It is interesting that the purchasing pattern apparently reflected in the pig body part representation matches with that reflected by the cattle bones. The rowhouse appeared to contain mostly moderate-to-low price beef cuts of moderate-to-high cost-efficiency. This is clearly the purchasing emphasis represented by the extremely large number of pig shoulder bones. In the well assemblage the larger proportion of ham bones, the most expensive pork cut, mimics the purchasing pattern reflected in the cattle remains.

The pig butchery patterns are not especially well represented, but the information that is available suggests a basic continuity throughout the time period (Figs. 7-9). Many of the femur and humerus fragments had small cut marks on them running perpendicular to the long axis of the bone. These are related to the actual carving of the meat. The butchery to create individual portions is represented by divisions through the bones themselves.

On the rear leg the division through the tibia represents the lower cut around the ham while the division through the ilium represents the upper cut around the ham. On the fore limb, the choice of where through the radius to make the lower division around the shoulder seems to have varied slightly, but not significantly. An upper division seem to have been made through the scapula. Very little else can be said about the overall butchery patterns.

The body part representation and butchery patterns for the caprids is very similar to that of the pigs (Figs. 4, 10). The major peaks are clearly at the upper fore limb and upper hind limb. The size of the sample of sheep and/or goat bones is too small to recognize any patterning except for the emphasis on these meaty portions of the carcass. Similarly, the size of the sample is too small to interpret much about caprid butchery patterns. There are several ways that some aspects of the pattern parallel butchery of pigs. Some of the humerus fragments have small cut marks from meat carving. Two of the divisions through bones are also similar; the division through the radius as the lower cut around the shoulder, and the division through the tibia as the lower cut around the meaty upper hind limb. The size of the sample of caprid bones in the assemblages is too small to warrant any interpretations about the purchasing patterns represented.

### Animal ages

Information on the fusion stages of the cattle, pig and caprid bones in the assemblages is presented in Tables 8-10. Bone fusion stages were recorded during the analysis and are based on the characteristics of mammalian bone growth. Most bones in mammals start as several components in young animals, and as the animal ages, these components grow together or "fuse." The age at which this fusion takes place is known for many different types of animals. The state of bone fusion can therefore be used to determine the ages of animals at their time of death. There are, however, a number of problems with interpreting the ages of animals from the state of bone fusion that must be kept in mind. Bones of young animals tend to be underrepresented in any assemblage that has been subjected to destructive forces; bones of young animals are considerably less dense and durable than bones of fully adult animals. In addition, the stage of fusion does not provide a precise age, but only reflects whether an animal is younger or older than a particular age.

These problems aside, it is possible to make some preliminary interpretations from the fusion data. Perhaps the most important point is that, even though the sample sizes are small, there is no clear

Table 8. Fusion stages of cattle bones.

Age of fusion*	Body part	Cellar			Kitchen midden			Well			Rowhouse		
		U†	E	F	U	E	F	U	E	F	U	E	F
7-10 months	scapula	-	-	-	-	-	-	-	-	1	-	-	-
	acetabulum	-	-	1	-	-	-	-	-	1	-	-	-
12-18 months	distal humerus	-	-	-	-	-	1	-	-	4	-	-	2
	proximal radius	-	-	-	-	-	-	-	-	5	-	-	-
18 months	distal first phalanx	-	-	3	-	-	-	-	-	2	-	-	-
	distal second phalanx	-	-	1	1	-	-	-	-	-	-	-	-
24-30 months	distal metacarpal	-	-	1	-	-	-	1	-	2	-	-	-
	distal tibia	-	-	-	-	-	-	-	-	3	1	-	-
27-36 months	distal metatarsal	2	-	-	-	-	-	-	-	-	-	-	-
36-42 months	calcaneum	1	-	-	-	-	-	-	-	4	-	-	-
42 months	proximal femur	1	-	-	-	-	-	1	-	1	-	-	-
42-48 months	proximal humerus	-	-	1	-	-	-	1	-	2	-	-	-
	distal radius	-	-	-	-	-	-	1	-	1	-	-	1
	ulna	1	-	-	-	-	-	2	-	-	-	-	-
	distal femur	1	-	1	-	-	-	4	-	3	-	-	-
	proximal tibia	1	-	-	-	-	1	5	-	-	1	-	-

\*Based on Silver (1969).

† U= unfused, E= epiphyseal line, F= fused.

Table 9. Fusion stages of pig bones.

Age of fusion*	Body part	Cellar			Kitchen Midden			Well			Rowhouse		
		U†	E	F	U	E	F	U	E	F	U	E	F
12 months	scapula	-	-	1	1	-	-	-	-	2	1	-	-
	distal humerus	2	-	-	-	-	-	2	-	1	7	1	-
	proximal radius	-	-	1	-	-	-	-	-	-	-	-	1
	proximal second phalanx	-	-	-	-	-	-	1	-	-	-	-	-
	acetabulum	-	-	-	1	-	-	-	-	4	1	-	-
24 months	distal metacarpal	-	-	-	1	-	-	-	-	-	1	-	-
	proximal first phalanx	1	-	-	-	-	-	-	-	-	1	-	-
	distal tibia	-	-	-	1	-	-	-	-	-	-	-	-
24-30 months	calcaneum	-	-	-	1	-	-	1	-	-	-	-	-
27 months	distal metatarsal	-	-	-	1	-	-	-	-	-	-	-	-
30 months	distal fibula	-	-	-	-	-	-	-	-	-	-	-	-
36-42 months	ulna	1	-	-	-	-	-	-	-	-	2	-	-
42 months	proximal humerus	-	-	-	-	-	-	-	-	-	1	-	-
	distal radius	1	-	-	-	-	-	1	-	-	-	-	-
	proximal femur	-	-	-	-	-	-	1	-	-	1	-	-
	distal femur	2	-	-	-	-	-	1	-	-	1	-	-
	proximal tibia	-	-	-	-	-	-	-	-	-	-	-	-
	proximal fibula	-	-	-	-	-	-	-	-	-	-	-	-

\* Based on Silver (1969).

† U= unfused, E= epiphyseal line, F= fused.

Table 10. Fusion stages of sheep and goat bones.

Age of fusion*	Body part	Cellar			Kitchen midden			Well			Rowhouse		
		U†	E	F	U	E	F	U	E	F	U	E	F
6-8 months	scapula	-	-	-	-	-	-	-	-	-	-	-	-
6-10 months	acetabulum	-	-	-	-	-	-	-	-	-	-	-	1
10 months	distal humerus	-	-	1	-	-	1	-	-	1	1	-	2
	proximal radius	-	-	1	-	-	-	-	-	4	-	-	-
13-16 months	distal first phalanx	-	-	3	-	-	-	-	-	-	-	-	-
	distal second phalanx	-	-	2	-	-	-	-	-	-	-	-	-
18-24 months	distal metacarpal	-	-	-	-	-	-	-	-	-	-	-	-
	distal tibia	-	-	-	-	-	-	-	-	1	-	-	-
20-28 months	distal metatarsal	-	-	-	-	-	-	-	-	-	1	-	-
30 months	ulna	-	-	-	-	-	-	-	-	-	-	-	-
30-36 months	calcaneum	-	-	-	-	-	-	-	-	-	-	-	-
	proximal femur	1	-	-	-	-	-	1	-	-	-	-	-
36 months	distal radius	2	-	-	-	-	-	-	-	-	-	-	-
36-42 months	proximal humerus	-	-	-	-	-	-	-	-	-	-	-	-
	distal femur	-	-	-	-	-	-	-	-	-	-	-	1
	proximal tibia	-	-	-	-	-	-	-	-	-	2	-	-

\* Based on Silver (1969).

† U= unfused, E= epiphyseal line, F= fused.

evidence for significant variation in the ages of the animals represented in the four assemblages. This suggests that the slaughtering ages might have been relatively consistent throughout the period.

To the extent that the fusion pattern represents the age profile of the death assemblage, it would appear that the vast majority of the cattle were slaughtered as adults (Tab. 8). Only a single cow bone was present in all four of the assemblages that was definitely from a cow less than two years of age. By contrast, all of the assemblages contained a number of bones from cattle that were more than three and one-half years of age at their time of death. This reflects, no doubt, the use of adult cattle for purposes besides just meat, such as dairy or draft purposes.

By way of contrast, pigs were raised solely for food, and slaughtered at very young ages. There are no bones in any of the assemblages that are definitely from animals more than one year old at the time of death, and all of the assemblage contain some bones from pigs less than one year old at the time of death (Tab. 9). The few caprid bones for which fusion data was available suggest that both older and younger animals are represented in the assemblages (Tab. 10). Beyond this it is impossible to be more specific about the caprid slaughter ages.

## Conclusion

In terms of the overall dietary patterns represented, the analysis of the assemblages from Gott's Court provides no real surprises. Domestic mammals were the most important source of meat in the diet; beef and pork were clearly always more important than mutton. Bird remains are far less significant in the deposits, and domestic birds predominate. There are very few fish, wild mammals, or other types of animals represented in the assemblages. All of these characteristics are fairly typical for urban historical assemblages on the southeastern coastal plain (Reitz 1986).

In terms of the cuts of meat represented, and the proportional representation of different domestic mammals, there are some obvious differences in the assemblages. In the 18th- and 19th-century components the relative representation of cattle and pigs seem to be fairly close. This changes sharply in the early-20th century deposits, where the proportional representation of pig bones increases dramatically. This change in taxonomic representation is accompanied by a change in the range and types of body parts represented. In the 18th- and early-19th-century deposits a wide range of different body parts is present, and the overall impression

is that the body part patterning reflects a relatively high status purchasing and/or consumption pattern. With the shift to a greater emphasis on pork in the rowhouse level deposits comes a shift to less expensive and more cost-efficient cuts of both beef and pork. In addition, the more expensive beef cuts present are very small steak cuts, while the more cost-efficient cuts are present as larger roast type portions.

This change might reflect, in part, a broader pattern of working class diet developing in Maryland's cities in the early-20th century. The faunal assemblage from the rowhouse levels at Gott's Court is similar in some ways to the faunal assemblage from a working class household in Baltimore, Maryland (Feature 19AØ1 of the Maryland Stadium Authority Project). In particular, this assemblage also reflected a similar type of emphasis on pork shoulder roasts as an important part of the diet, and the inclusion of a range of different beef cuts. However, the beef cuts represented in the assemblage from Baltimore included a much larger proportion of more expensive, less cost-efficient cuts. The purchasing pattern represented in the rowhouse level deposits includes fewer expensive cuts, and is much more clearly dominated by relatively inexpensive, highly cost-efficient cuts of meat.

There are a number of ways that aspects of the assemblages demonstrate change through time. One of these seems to be a decrease in the diversity represented in the diet; the range of animals and body parts represented both appear to decrease through time. This might be due to taphonomic or other differences in the assemblages, but it might also reflect a gradual increase through time in the importance of domestic animals in the urban diet.

There also seems to be a trend towards standardization of butchery outside the household and growing dependence on market purchase of specific cuts of meat. This is seen in the disappearance of cattle and caprid head and foot elements from the most recent deposits, and in the increased emphasis on a limited number of specific cuts of meat. Butchery practices also change through time, most noticeably in the use of saws for butchery beginning sometime before the early-to-mid 19th century. There is also evidence in the cattle butchery patterns of increasingly standardized and more discrete cuts of beef being created from the mid-19th century onward. All of these diachronic changes in aspects of diet and urban foodways are undoubtedly related, in turn, to the broad developments that are transforming the nature of urban life between the late-18th century and early-20th century.



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## Bone Catalogue

The following pages contain a complete catalogue of the bones in the four assemblages. This catalogue was generated using StatView® software for the Macintosh, and formed the basis for all of the tables included in the faunal report. Each assemblage was entered in a separate file. The Cellar assemblage comes first, followed by the Kitchen midden, Well, and Rowhouse, respectively. The catalogue sheets for each assemblage are also identified by letters in the upper left hand corner of each page. Each row is sequentially numbered for each assemblage and represents a single record. Each of the 18 columns contains specific information about the bones listed in each record. A single record runs more than one page, thus identical row numbers on sequential pages represent the same record. The columns are detailed below.

Column 1: QNTY is quantity. Number of fragments included in individual record.

Column 2: CLASS is taxonomic class.

Column 3: Taxon is the most specific taxonomic identification possible.

Column 4: BP is body part, modified after Gifford and Crader (1977).

1. CRA=cranial
2. MAXT=maxilla with teeth
3. DEN=dentary
4. DENT=dentary with teeth
5. TTH=loose tooth
6. ATL=atlas
7. AXI=axis
8. CER=cervical vertebra
9. THO=thoracic vertebra
10. LUM=lumber vertebra
11. SYN=synsacrum
12. SAC=sacrum
13. CAU=caudal vertebra
14. VRT=unspecified vertebra
15. RIB=rib
16. SCP=scapula
17. COR=coracoid
18. FUR=furcula
19. STE=sternum
20. HUM=humerus
21. RAD=radius

22. ULN=ulna
23. CAR=carpal
24. CMC=carpometacarpus
25. MC=metacarpal
26. PHA1=first phalanx
27. PHA2=second phalanx
28. PHA3=third phalanx
29. PHAA=anterior phalanx
30. PHAP=posterior phalanx
31. PHA=unspecified phalanx
32. PEL=pelvis
33. INN=innominate
34. ACE=acetabulum
35. ILM=ilium
36. ISC=ischium
37. PUB=pubis
38. FEM=femur
39. PAT=patella
40. TIB=tibia
41. TBT=tibiotarsus
42. FIB=fibula
43. TAR=tarsal
44. TMT=tarsometatarsus
45. MT=metatarsal
46. LBN=unspecified long bone
47. NID=not identified
48. OTH=other
49. SHL=shell
50. SLH=shell with hinge portion present (bivalves)
51. MET=unspecified metapodial
52. COS=costal cartilage

Column 5: POR is portion, modified after Gifford and Crader (1977)

1. fr=fragment otherwise unspecified
2. sh=shaft
3. co=complete
4. ant=anterior
5. mid=middle or central
6. pos=posterior
7. inf=inferior
8. sup=superior
9. hfl=half-longitudinal
10. px=proximal end
11. psh=proximal plus partial shaft

- 12. pse=proximal shaft minus epiphysis
- 13. cp=complete shaft/bone and proximal end
- 14. cs=complete shaft
- 15. cd=complete shaft/bone and distal end
- 16. ds=distal end
- 17. dsh=distal end and partial shaft
- 18. dse=distal shaft minus epiphysis

Column 6: Px F is proximal/anterior fusion state.

Column 7: Dx F is distal/posterior fusion state. F=fused, U=unfused, E=epiphyseal line, ND=no data.

Column 8: SYM is symmetry. L=left, R=right, A=axial, LLMR=lateral left or medial right, MLLR=medial left or lateral right, U=unknown.

Column 9: WEA is the maximum weathering stage after Behrensmeyer (1978).

Column 10: BN is the burn stage, modified after Crader (1984).

Column 11: #BT is the number of fragments with butchery marks.

Column 12: CT is the total number of cut marks observed.

Column 13: CH is the total number of chop marks observed.

Column 14: SH is the total number of shear marks observed.

Column 15: SW is the total number of saw marks observed.

Column 16: RD is the total number of fragments with rodent gnaw marks.

Column 17: CN is the total number of fragments with carnivore gnaw marks.

Column 18: Comments contains any additional comments about the bones.

CC	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT	CT
1	1	Mammal	Bos taurus	ISC	fr	ND	ND	R	1	.	1	.
2	1	Mammal	Bos taurus	FEM	ds	ND	U	L	.	.	.	.
3	1	Mammal	Bos taurus	FEM	px	U	ND	L	.	.	.	.
4	1	Mammal	Bos taurus	ILM	mid	ND	ND	U	.	.	1	.
5	1	Mammal	Bos taurus	ILM	fr	ND	ND	U	3	.	.	.
6	1	Mammal	Bos taurus	ILM	sup	ND	ND	R	.	.	1	1
7	1	Mammal	Bos taurus	FEM	dsh	ND	F	L	3	.	.	.
8	2	Mammal	Bos taurus	SAC	pos	ND	ND	A	.	.	.	.
9	1	Mammal	Bos taurus	TIB	sh	ND	ND	L	3	.	.	.
10	1	Mammal	Bos taurus	TIB	pse	U	ND	R	.	.	1	.
11	1	Mammal	Bos taurus	FEM	px	ND	ND	L	.	.	1	.
12	1	Mammal	Bos taurus	PAT	co	ND	ND	R	.	.	.	.
13	1	Mammal	Bos taurus	SAC	ant	U	ND	A	1	.	1	3
14	1	Mammal	Bos taurus	ILM	ant	ND	ND	L	1	.	1	.
15	1	Mammal	Bos taurus	MC	dsh	ND	F	R	.	.	1	.
16	1	Mammal	Bos taurus	HUM	sh	ND	ND	L	.	.	1	2
17	1	Mammal	Bos taurus	MC	co	ND	ND	U	.	.	.	.
18	1	Mammal	Bos taurus	ULN	fr	U	ND	R	1	.	1	.
19	1	Mammal	Bos taurus	CAR	fr	ND	ND	L	1	.	.	.
20	1	Mammal	Bos taurus	HUM	psh	F	ND	L	.	.	1	2
21	1	Mammal	Bos taurus	MC	psh	F	ND	L	.	.	1	.
22	1	Mammal	Bos taurus	SCP	sup	ND	ND	R	.	.	1	.
23	2	Mammal	Bos taurus	PHA3	co	F	ND	MLLR	.	.	1	2
24	1	Mammal	Bos taurus	ACE	fr	ND	F	L	1	.	1	1
25	2	Mammal	Bos taurus	PHA1	co	F	F	LLMR	.	.	1	1
26	1	Mammal	Bos taurus	PHA1	co	F	F	MLLR	.	.	.	.
27	1	Mammal	Bos taurus	PHA2	fr	F	F	U	2	.	.	.
28	1	Mammal	Bos taurus	MT	ds	ND	U	R	.	.	1	.
29	1	Mammal	Bos taurus	TAR	cd	U	ND	L	.	.	1	1
30	1	Mammal	Bos taurus	CRA	fr	ND	ND	U	2	.	.	.
31	1	Mammal	Bos taurus	MT	dsh	ND	U	L	.	.	1	.
32	1	Mammal	Bos taurus	TTH	fr	ND	ND	R	.	.	.	.
33	1	Mammal	Bos taurus	TTH	co	ND	ND	L	.	.	.	.
34	1	Mammal	Bos taurus	TTH	fr	ND	ND	R	.	.	.	.
35	2	Mammal	Bos taurus	TAR	co	ND	ND	R	2	.	.	.
36	2	Mammal	Bos taurus	CER	fr	ND	ND	A	1	.	1	.
37	2	Mammal	Bos taurus	THO	sup	ND	ND	A	.	.	1	1
38	2	Mammal	Bos taurus	THO	hfl	U	U	A	.	.	2	.
39	1	Mammal	Bos taurus	CRA	fr	ND	ND	R	3	.	.	.
40	1	Mammal	Bos taurus	CRA	fr	ND	ND	L	.	.	.	.
41	1	Mammal	Bos taurus	MAXT	fr	ND	ND	L	2	.	.	.
42	1	Mammal	Sus scrofa	TAR	fr	ND	ND	R	.	.	1	.
43	1	Mammal	Sus scrofa	PHA1	cd	U	F	MLLR	.	.	.	.
44	1	Mammal	Sus scrofa	TAR	co	ND	ND	L	.	.	.	.
45	1	Mammal	Sus scrofa	ULN	dsh	ND	U	R	1	.	.	.
46	2	Mammal	Sus scrofa	HUM	dse	ND	U	L	1	.	.	.
47	1	Mammal	Sus scrofa	RAD	dsh	ND	U	R	1	.	1	.
48	1	Mammal	Sus scrofa	RAD	psh	F	ND	L	1	.	.	.
49	1	Mammal	Sus scrofa	MC	psh	F	ND	L	.	.	.	.

C	CH	SH	SW	RD	CN	Comments
1	1	1	.	.	1	
2	.	.	.	.	1	
3	.	.	.	.	.	
4	.	1	.	.	.	
5	.	.	.	.	.	
6	.	.	.	.	.	
7	.	.	.	.	.	
8	.	.	.	.	.	
9	.	.	.	.	.	
10	.	1	.	.	1	
11	.	1	.	.	.	
12	.	.	.	.	.	
13	.	1	.	.	.	
14	3	.	.	.	.	
15	.	1	.	.	.	
16	.	.	.	.	.	
17	.	.	.	.	.	V
18	.	1	.	.	.	
19	.	.	.	.	.	
20	.	1	.	.	1	
21	1	.	.	.	.	
22	.	1	.	.	.	
23	1	.	.	.	.	
24	.	1	1	.	.	
25	.	.	.	1	.	
26	.	.	.	1	.	
27	.	.	.	.	.	
28	.	1	.	.	.	
29	1	.	.	.	1	cal
30	.	.	.	.	.	max
31	1	1	.	.	.	
32	.	.	.	.	.	UM2:h
33	.	.	.	.	.	LM2:k
34	.	.	.	.	.	UM3 > 3 yrs
35	.	.	.	.	1	nvc
36	.	1	.	.	.	
37	.	.	.	.	.	
38	.	3	.	.	.	
39	.	.	.	.	1	pal
40	.	.	.	.	1	pal
41	.	.	.	.	.	> 3 yrs
42	.	1	.	.	.	cal
43	.	.	.	.	.	
44	.	.	.	.	1	ast
45	.	.	.	.	.	epiph present
46	.	.	.	.	1	
47	.	1	.	.	.	epiph present
48	.	.	.	.	1	
49	.	.	.	.	1	

C	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT	CT
50	2	Mammal	Sus scrofa	CRA	fr	ND	ND	A	•	•	•	•
51	2	Mammal	Sus scrofa	MC	psh	F	ND	R	1	•	•	•
52	2	Mammal	Sus scrofa	MT	psh	F	ND	L	•	•	•	•
53	1	Mammal	Sus scrofa	SCP	fr	ND	F	R	•	•	1	7
54	1	Mammal	Sus scrofa	FIB	sh	ND	ND	L	•	•	•	•
55	1	Mammal	Sus scrofa	TTH	fr	ND	ND	R	•	•	•	•
56	1	Mammal	Sus scrofa	TTH	fr	ND	ND	L	•	•	•	•
57	8	Mammal	Sus scrofa	TTH	fr	ND	ND	U	•	•	•	•
58	1	Mammal	Sus scrofa	TIB	sh	ND	ND	R	•	•	1	•
59	2	Mammal	Sus scrofa	LUM	fr	U	U	L	•	•	1	1
60	3	Mammal	Sus scrofa	THO	fr	U	U	A	•	•	3	•
61	1	Mammal	Sus scrofa	TIB	sh	ND	ND	L	1	•	•	•
62	1	Mammal	Sus scrofa	FIB	sh	ND	ND	R	•	•	•	•
63	1	Mammal	Sus scrofa	FEM	sh	ND	U	R	1	•	1	3
64	1	Mammal	Sus scrofa	MAXT	ant	ND	ND	R	•	•	•	•
65	2	Mammal	Sus scrofa	MET	ds	ND	ND	U	•	•	1	•
66	1	Mammal	Sus scrofa	MAXT	mid	ND	ND	L	1	•	•	•
67	1	Mammal	Sus scrofa	MAXT	ant	ND	ND	L	•	•	•	•
68	1	Mammal	Sus scrofa	FEM	ds	ND	U	L	•	•	•	•
69	1	Mammal	Sus scrofa	MAXT	pos	ND	ND	R	•	•	•	•
70	1	Mammal	Ovis/Capra	TIB	sh	ND	ND	R	•	•	1	•
71	2	Mammal	Ovis/Capra	PHA2	fr	F	F	MLLR	1	•	•	•
72	2	Mammal	Ovis/Capra	PHA1	co	F	F	MLLR	•	•	•	•
73	1	Mammal	Ovis/Capra	FEM	px	U	ND	R	•	•	•	•
74	1	Mammal	Ovis/Capra	PHA1	co	E	F	LLMR	•	•	•	•
75	2	Mammal	Ovis/Capra	RAD	sh	ND	ND	R	1	•	•	•
76	1	Mammal	Ovis/Capra	TTH	co	ND	ND	L	•	•	•	•
77	1	Mammal	Ovis/Capra	MAXT	mid	ND	ND	R	•	•	•	•
78	1	Mammal	Ovis/Capra	SCP	mid	ND	ND	R	1	•	•	•
79	2	Mammal	Ovis/Capra	THO	hfl	U	U	A	•	•	2	•
80	1	Mammal	Ovis/Capra	RAD	dse	ND	U	L	•	•	1	•
81	3	Mammal	medium	LUM	fr	U	U	A	1	•	1	•
82	5	Mammal	medium	VRT	fr	U	U	A	•	•	2	•
83	1	Mammal	medium	TIB	sh	ND	ND	U	3	•	1	•
84	1	Mammal	medium	THO	sup	ND	ND	A	•	•	1	2
85	13	Mammal	medium	LBN	sh	ND	ND	U	1	•	2	3
86	1	Mammal	medium	RIB	sup	ND	ND	U	•	•	•	•
87	1	Mammal	medium	RIB	mid	ND	ND	U	3	•	•	•
88	4	Mammal	medium	RIB	mid	ND	ND	U	•	•	•	•
89	2	Mammal	medium	RIB	mid	ND	ND	U	•	4	•	•
90	2	Mammal	medium	RIB	mid	ND	ND	U	1	•	2	2
91	1	Mammal	medium	RIB	mid	ND	ND	U	2	•	•	•
92	4	Mammal	medium	LBN	sh	ND	ND	U	•	4	•	•
93	1	Mammal	medium	LBN	sh	ND	ND	U	•	3	•	•
94	2	Mammal	medium	LBN	sh	ND	ND	U	•	2	•	•
95	1	Mammal	medium	LBN	sh	ND	ND	U	1	•	•	•
96	6	Mammal	medium	LBN	sh	ND	ND	U	2	•	•	•
97	1	Mammal	medium	LBN	sh	ND	ND	U	1	•	•	•
98	2	Mammal	medium	COS	fr	ND	ND	U	•	•	•	•



C	CH	SH	SW	RD	CN	Comments
50	.	.	.	.	.	jug & sqa
51	.	.	.	.	1	
52	.	.	.	.	.	
53	.	.	.	.	.	
54	.	.	.	.	.	
55	.	.	.	.	.	LM2:e
56	.	.	.	.	.	UM2:d
57	.	.	.	.	.	
58	.	1	.	.	.	
59	.	.	.	1	2	
60	.	3	.	.	.	
61	.	.	.	.	1	
62	.	.	.	.	.	
63	.	.	.	.	.	
64	.	.	.	.	.	
65	.	1	.	.	.	
66	.	.	.	.	.	
67	.	.	.	.	.	
68	.	.	.	.	1	
69	.	.	.	.	.	c 12-18 mo
70	.	1	.	.	.	rust stain
71	.	.	.	.	.	
72	.	.	.	.	.	
73	.	.	.	.	1	
74	.	.	.	.	.	
75	.	.	.	.	2	
76	.	.	.	.	.	UM3 3-4 yrs
77	.	.	.	.	.	6-12 mo
78	.	.	.	.	1	
79	.	3	.	.	.	
80	5	.	.	.	.	
81	.	1	.	.	.	
82	.	2	.	.	.	
83	.	.	.	.	.	
84	.	.	.	.	.	
85	1	1	.	.	3	
86	.	.	.	.	1	
87	.	.	.	.	.	
88	.	.	.	.	.	
89	.	.	.	.	.	
90	.	.	.	.	.	
91	.	.	.	.	.	
92	.	.	.	.	.	
93	.	.	.	.	.	
94	.	.	.	.	.	
95	.	.	.	.	.	
96	.	.	.	.	.	
97	.	.	.	.	1	dark discolor
98	.	.	.	.	.	

APPENDIX  
VI

VII

	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT	CT
99	23	Mammal	medium	LBN	sh	ND	ND	U	.	.	1	2
100	1	Mammal	medium	LBN	sh	ND	ND	U	.	4	.	.
101	21	Mammal	medium	CRA	fr	ND	ND	A	.	.	.	.
102	5	Mammal	medium	CRA	fr	ND	ND	A	1	.	.	.
103	1	Mammal	medium	RIB	inf	ND	ND	U	1	.	.	.
104	3	Mammal	medium	PHA	fr	ND	ND	U	.	.	.	.
105	1	Mammal	medium	RIB	inf	ND	ND	U	.	.	.	.
106	1	Mammal	medium	OTH	fr	ND	ND	U	.	.	.	.
107	5	Mammal	medium	SCP	fr	ND	ND	U	.	.	.	.
108	1	Mammal	md/large	SCP	mid	ND	ND	U	3	.	.	.
109	1	Mammal	md/large	RIB	sup	ND	ND	L	1	.	.	.
110	6	Mammal	md/large	CRA	fr	ND	ND	A	.	.	.	.
111	1	Mammal	md/large	LBN	sh	ND	ND	U	1	.	1	2
112	2	Mammal	md/large	LBN	sh	ND	ND	U	.	.	.	.
113	2	Mammal	md/large	CRA	fr	ND	ND	A	1	.	.	.
114	2	Mammal	md/large	RIB	mid	ND	ND	U	.	.	.	.
115	1	Mammal	md/large	RIB	mid	ND	ND	U	1	.	.	.
116	3	Mammal	large	LBN	sh	ND	ND	U	2	.	.	.
117	2	Mammal	large	CRA	fr	ND	ND	A	.	.	.	.
118	4	Mammal	large	LBN	sh	ND	ND	U	1	.	.	.
119	2	Mammal	large	CRA	fr	ND	ND	A	2	.	.	.
120	1	Mammal	large	RIB	mid	ND	ND	U	2	.	.	.
121	4	Mammal	large	LBN	sh	ND	ND	U	.	.	1	3
122	2	Mammal	large	RIB	mid	ND	ND	U	1	.	.	.
123	4	Mammal	large	RIB	mid	ND	ND	U	.	.	1	.
124	8	Mammal	large	VRT	fr	ND	ND	A	.	.	2	.
125	2	Mammal	large	RIB	sup	ND	ND	L	1	.	.	.
126	1	Bird	Gallus gallus	HUM	fr	F	F	R	1	.	.	.
127	1	Bird	Gallus gallus	RAD	psh	F	ND	R	.	.	.	.
128	1	Bird	Gallus gallus	FIB	px	F	ND	L	.	.	.	.
129	1	Bird	Gallus gallus	COR	fr	ND	ND	R	.	.	.	.
130	2	Bird	Gallus gallus	INN	fr	ND	U	R	.	.	.	.
131	1	Bird	Anatidae	HUM	px	F	ND	L	.	.	.	.
132	1	Bird	Anatidae	ULN	dsh	ND	F	L	.	.	.	.
133	1	Bird	Anatidae	SCP	fr	F	ND	L	.	.	.	.
134	1	Bird	Anatidae	COR	psh	F	ND	R	.	.	.	.
135	1	Bird	Anatidae	SCP	fr	F	ND	R	.	.	.	.
136	1	Mammal	unid	NID	fr	ND	ND	U	.	3	.	.
137	22	Mammal	unid	NID	fr	ND	ND	U	1	.	1	.
138	20	Mammal	unid	NID	fr	ND	ND	U	.	4	.	.
139	5	Mammal	unid	NID	fr	ND	ND	U	3	.	.	.
140	44	Fish	unid	OTH	fr	ND	ND	U	.	.	.	.
141	11	Mammal	unid	NID	fr	ND	ND	U	2	.	.	.
142	1	UNID	unid	NID	fr	ND	ND	U	.	.	.	.
143	13	Bird	unid	NID	fr	ND	ND	U	.	.	.	.
144	4	UNID	unid	NID	fr	ND	ND	U	.	.	.	.
145	1	Mammal	unid	NID	fr	ND	ND	U	.	.	.	.
146	1	Mammal	unid	NID	fr	ND	ND	U	.	.	.	.
147	71	UNID	unid	NID	fr	ND	ND	U	.	.	.	.

C	CH	SH	SW	RD	CN	Comments
99	.	.	.	.	.	
100	.	.	.	.	.	
101	.	.	.	.	.	
102	.	.	.	.	.	
103	.	.	.	.	.	
104	.	.	.	.	.	
105	.	.	.	.	.	
106	.	.	.	.	.	
107	.	.	.	.	.	
108	.	.	.	.	1	
109	.	.	.	.	.	
110	.	.	.	.	.	
111	.	.	.	.	.	
112	.	.	.	.	.	
113	.	.	.	.	.	
114	.	.	.	.	.	
115	.	.	.	.	.	
116	.	.	.	.	.	
117	.	.	.	.	.	
118	.	.	.	.	1	
119	.	.	.	.	.	
120	.	.	.	.	.	
121	.	.	.	.	.	
122	.	.	.	.	.	
123	.	1	.	.	1	1 black discol.
124	2	1	.	.	.	
125	.	.	.	.	.	2 black discol.
126	.	.	.	.	.	
127	.	.	.	.	.	
128	.	.	.	.	.	
129	.	.	.	.	.	very young
130	.	.	.	.	.	very young
131	.	.	.	.	.	small wild duck
132	.	.	.	.	.	
133	.	.	.	.	.	
134	.	.	.	.	.	
135	.	.	.	.	.	
136	.	.	.	.	.	
137	.	1	.	.	.	
138	.	.	.	.	.	
139	.	.	.	.	.	
140	.	.	.	.	.	some cra.
141	.	.	.	.	.	
142	.	.	.	.	.	
143	.	.	.	.	.	
144	.	.	.	.	.	
145	.	.	.	.	.	tool, handle?
146	.	.	.	.	.	
147	.	.	.	.	.	

	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT	CT
148	111	Mammal	unid	NID	fr	ND	ND	U	.	.	5	4
149	1	Bird	unid	CAR	fr	ND	ND	U	.	.	.	.
150	5	Bird	unid	PHAP	fr	ND	ND	U	.	.	.	.
151	9	Mammal	unid	TTH	fr	ND	ND	U	.	.	.	.
152	1	Bird	unid	COR	fr	ND	ND	L	.	.	.	.
153	4	Bird	unid	RIB	fr	ND	ND	U	.	.	.	.
154	1	Bird	unid	TMT	sh	ND	U	L	.	.	.	.
155	2	Bird	unid	LBN	sh	ND	ND	U	1	.	.	.
156	23	Bird	unid	LBN	sh	ND	ND	U	.	.	.	.
157	1	Bird	Anas sp.	STE	ant	F	ND	A	.	.	1	2
158	1	Bird	Columbidae	RAD	co	F	F	R	.	.	.	.
159	1	Bird	Columbidae	ULN	co	F	F	R	.	.	.	.
160	1	Bird	Columbidae	TMT	dsh	ND	F	L	.	.	.	.
161	1	Bird	Branta canadensis	FEM	fr	F	F	L	.	.	1	5
162	1	Bird	Branta canadensis	COR	fr	F	F	R	.	.	1	1
163	1	Reptile	Testudinata	SHL	fr	ND	ND	U	.	.	.	.
164	2	Mammal	Felis domesticus	MET	fr	F	F	U	.	.	.	.
165	2	Mammal	Felis domesticus	RAD	fr	F	F	R	.	.	.	.
166	1	Mammal	O. aries	RAD	psh	F	ND	L	.	.	1	.
167	1	Mammal	O. aries	RAD	ds	ND	U	R	.	.	1	.
168	1	Mammal	O. aries	HUM	dsh	ND	F	L	.	1	1	.

C	CH	SH	SW	RD	CN	Comments
148	1	3	.	.	1	
149	.	.	.	.	.	
150	.	.	.	.	.	
151	.	.	.	.	.	
152	.	.	.	.	.	
153	.	.	.	.	.	
154	.	.	.	.	.	
155	.	.	.	.	1	
156	.	.	.	.	.	
157	.	.	.	.	1	
158	.	.	.	.	.	
159	.	.	.	.	.	
160	.	.	.	.	.	
161	.	.	.	.	.	
162	.	.	.	.	1	
163	.	.	.	.	.	
164	.	.	.	.	.	
165	.	.	.	.	.	
166	.	1	.	.	.	
167	.	1	.	.	.	
168	.	.	.	.	1	

K	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
1	1	Mammal	Bos taurus	TAR	fr	ND	ND	L	.	.	.
2	1	Mammal	Bos taurus	TTH	fr	ND	ND	U	.	.	.
3	1	Mammal	Bos taurus	TIB	dsh	F	ND	R	3	.	.
4	1	Mammal	Bos taurus	MT	psh	F	ND	L	2	.	1
5	1	Mammal	Bos taurus	FEM	sh	ND	ND	R	.	.	1
6	1	Mammal	Bos taurus	DEN	inf	ND	ND	U	1	.	1
7	1	Mammal	Bos taurus	LUM	sup	ND	ND	A	.	.	1
8	2	Mammal	Bos taurus	LUM	fr	ND	U	A	1	.	1
9	1	Mammal	Bos taurus	LUM	hfl	U	U	A	.	.	1
10	1	Mammal	Bos taurus	TTH	fr	ND	ND	U	.	.	.
11	1	Mammal	Bos taurus	ILM	fr	ND	ND	U	.	.	1
12	1	Mammal	Bos taurus	PHA1	ds	ND	ND	MLLR	.	.	1
13	1	Mammal	Bos taurus	HUM	dsh	ND	F	R	.	.	1
14	1	Mammal	Bos taurus	PHA1	px	F	ND	MLLR	.	.	1
15	1	Mammal	Bos taurus	PHA2	fr	U	ND	MLLR	2	.	.
16	1	Mammal	Bos taurus	PHA2	fr	F	ND	LLMR	1	.	.
17	1	Mammal	Sus scrofa	SCP	fr	ND	ND	U	.	.	.
18	1	Mammal	Sus scrofa	SCP	dsh	ND	U	L	2	.	.
19	2	Mammal	Sus scrofa	HUM	sh	ND	ND	R	.	.	1
20	3	Mammal	Sus scrofa	RIB	mid	ND	ND	U	.	.	.
21	2	Mammal	Sus scrofa	CER	fr	ND	ND	A	1	.	.
22	1	Mammal	Sus scrofa	MT	cp	ND	U	L	.	.	.
23	2	Mammal	Sus scrofa	FIB	sh	ND	ND	U	.	.	.
24	1	Mammal	Sus scrofa	MC	fr	ND	U	L	1	.	.
25	1	Mammal	Sus scrofa	TAR	fr	U	ND	L	1	.	.
26	1	Mammal	Sus scrofa	ISC	fr	ND	ND	L	.	.	1
27	1	Mammal	Sus scrofa	ILM	pos	ND	U	R	.	.	1
28	1	Mammal	Sus scrofa	TIB	dse	ND	U	R	.	.	.
29	1	Mammal	Sus scrofa	TIB	ds	ND	ND	L	.	.	.
30	1	Mammal	Ovis/Capra	SCP	fr	ND	ND	R	.	.	.
31	1	Mammal	Ovis/Capra	TTH	fr	ND	ND	L	.	.	.
32	1	Mammal	Ovis/Capra	ULN	ds	ND	ND	R	.	.	.
33	1	Mammal	Ovis/Capra	FEM	sh	ND	ND	R	1	.	.
34	1	Mammal	Ovis/Capra	DEN	pos	ND	ND	L	.	.	.
35	1	Mammal	medium	THO	sup	ND	ND	A	.	.	.
36	5	Mammal	medium	LBN	sh	ND	ND	U	2	.	.
37	1	Mammal	medium	LUM	fr	ND	ND	A	.	.	.
38	3	Mammal	medium	RIB	mid	ND	ND	U	.	.	.
39	7	Mammal	medium	LBN	sh	ND	ND	U	.	.	1
40	4	Mammal	medium	LBN	sh	ND	ND	U	1	.	.
41	3	Mammal	md/large	RIB	mid	ND	ND	U	1	.	.
42	2	Mammal	md/large	VRT	fr	ND	ND	A	2	.	1
43	3	Mammal	large	LBN	sh	ND	ND	U	2	.	.
44	2	Mammal	large	LBN	sh	ND	ND	U	.	.	.
45	3	Mammal	small	MET	fr	ND	ND	U	2	.	.
46	46	Mammal	unid	NID	fr	ND	ND	U	.	.	.
47	12	Mammal	unid	NID	fr	ND	ND	U	1	.	.
48	8	Fish	unid	NID	fr	ND	ND	U	.	.	.
49	4	Mammal	unid	NID	fr	ND	ND	U	2	.	.

K	CT	CH	SH	SW	RD	CN	Comments
1	.	.	.	.	.	.	cal
2	.	.	.	.	.	.	LM3:bk
3	.	.	.	.	.	1	4 frags mend
4	1	.	.	.	.	.	
5	6	.	2	.	.	.	
6	1	.	.	.	.	.	
7	1	.	.	.	.	1	
8	.	.	1	.	.	1	
9	.	.	1	.	.	.	
10	.	.	.	.	.	.	
11	.	.	1	.	.	.	1 rust stained
12	.	1	.	.	.	.	
13	8	.	2	.	.	.	
14	.	.	1	.	.	1	
15	.	.	.	.	.	.	
16	.	.	.	.	.	.	
17	.	.	.	.	.	.	
18	.	.	.	.	.	1	
19	2	.	.	.	.	2	
20	.	.	.	.	.	1	1 rust stained
21	.	.	.	.	.	2	
22	.	.	.	.	.	.	II
23	.	.	.	.	.	.	
24	.	.	.	.	.	1	III
25	.	.	.	.	.	1	cal
26	.	3	.	.	.	.	
27	1	.	.	.	.	1	
28	.	.	.	.	.	.	
29	.	.	.	.	.	.	
30	.	.	.	.	.	.	
31	.	.	.	.	.	.	LM3 3-4yrs
32	.	.	.	.	.	.	
33	.	.	.	.	.	1	
34	.	.	.	.	.	.	
35	.	.	.	.	.	.	
36	.	.	.	.	.	1	
37	.	.	.	.	.	.	
38	.	.	.	.	.	.	
39	2	.	.	.	.	.	
40	.	.	.	.	.	1	1 rust stained
41	.	.	.	.	.	1	
42	.	1	.	.	.	.	
43	.	.	.	.	.	2	
44	.	.	.	.	.	.	
45	.	.	.	.	.	.	
46	.	.	.	.	.	.	
47	.	.	.	.	.	.	
48	.	.	.	.	.	.	mni=1
49	.	.	.	.	.	1	

K	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
50	23	UNID	unid	NID	fr	ND	ND	U	.	.	.
51	5	Bird	unid	LBN	fr	ND	ND	U	.	.	.
52	1	Mammal	O. aries	HUM	dsh	ND	F	R	1	.	1



K	CT	CH	SH	SW	RD	CN	Comments
50	.	.	.	.	.	.	
51	.	.	.	.	.	.	2 medullary
52	6	1	.	.	.	.	

W	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
1	1	Mammal	Bos taurus	HUM	ds	ND	F	R	3	.	1
2	1	Mammal	Bos taurus	SCP	mid	ND	ND	L	.	.	1
3	1	Mammal	Bos taurus	HUM	ds	ND	F	R	.	.	.
4	1	Mammal	Bos taurus	HUM	sh	ND	ND	R	3	.	1
5	1	Mammal	Bos taurus	HUM	ds	ND	F	R	1	.	1
6	1	Mammal	Bos taurus	MT	psh	F	ND	R	2	.	1
7	1	Mammal	Bos taurus	THO	hfl	U	ND	A	1	.	1
8	1	Mammal	Bos taurus	HUM	ds	ND	F	L	.	.	1
9	1	Mammal	Bos taurus	SCP	dsh	ND	F	L	.	.	1
10	4	Mammal	Bos taurus	SCP	mid	ND	ND	R	3	.	4
11	1	Mammal	Bos taurus	HUM	px	F	ND	R	.	.	.
12	1	Mammal	Bos taurus	DEN	ant	ND	ND	R	3	.	.
13	2	Mammal	Bos taurus	DENT	fr	ND	ND	R	1	.	.
14	1	Mammal	Bos taurus	DEN	pos	ND	ND	R	1	.	.
15	8	Mammal	Bos taurus	DEN	fr	ND	ND	U	1	.	.
16	1	Mammal	Bos taurus	TTH	co	ND	ND	L	.	.	.
17	1	Mammal	Bos taurus	FEM	px	F	ND	R	.	.	.
18	1	Mammal	Bos taurus	HUM	px	F	ND	R	1	.	.
19	1	Mammal	Bos taurus	FEM	pse	U	ND	R	2	.	1
20	2	Mammal	Bos taurus	DEN	fr	ND	ND	L	1	.	.
21	1	Mammal	Bos taurus	DEN	pos	ND	ND	L	2	.	1
22	1	Mammal	Bos taurus	ATL	hfl	F	F	A	.	.	.
23	1	Mammal	Bos taurus	MC	psh	F	ND	L	.	.	.
24	1	Mammal	Bos taurus	MET	ds	ND	F	U	.	.	.
25	2	Mammal	Bos taurus	MC	co	F	F	R	3	.	.
26	1	Mammal	Bos taurus	LUM	hfl	F	F	A	.	.	1
27	1	Mammal	Bos taurus	MC	psh	F	U	R	4	.	.
28	1	Mammal	Bos taurus	ULN	sh	ND	ND	R	3	.	.
29	1	Mammal	Bos taurus	ULN	pse	U	ND	R	3	.	1
30	1	Mammal	Bos taurus	ULN	pse	U	ND	R	3	.	.
31	2	Mammal	Bos taurus	MET	sh	ND	ND	U	3	.	.
32	1	Mammal	Bos taurus	ULN	sh	ND	ND	R	1	.	.
33	1	Mammal	Bos taurus	LUM	hfl	ND	ND	A	3	.	.
34	2	Mammal	Bos taurus	CER	hfl	U	ND	A	3	.	2
35	1	Mammal	Bos taurus	SAC	hfl	U	ND	A	.	.	1
36	1	Mammal	Bos taurus	CER	pos	ND	F	A	.	.	1
37	1	Mammal	Bos taurus	CAU	co	F	F	A	.	.	.
38	1	Mammal	Bos taurus	CER	pos	ND	ND	A	3	.	1
39	1	Mammal	Bos taurus	LUM	hfl	ND	ND	A	.	.	1
40	2	Mammal	Bos taurus	LUM	sup	ND	ND	A	.	.	2
41	1	Mammal	Bos taurus	LUM	pos	ND	U	A	.	.	1
42	1	Mammal	Bos taurus	LUM	inf	U	U	A	3	.	1
43	1	Mammal	Bos taurus	LUM	ant	ND	ND	A	3	.	1
44	1	Mammal	Bos taurus	TTH	fr	ND	ND	U	.	.	.
45	1	Mammal	Bos taurus	TAR	fr	ND	ND	R	2	.	.
46	1	Mammal	Bos taurus	TAR	fr	F	ND	R	4	.	.
47	1	Mammal	Bos taurus	TAR	co	F	ND	L	2	.	.
48	2	Mammal	Bos taurus	TAR	co	ND	ND	L	.	.	1
49	1	Mammal	Bos taurus	TAR	ds	ND	ND	L	.	.	.

W	CT	CH	SH	SW	RD	CN	Comments
1	2	.	.	1	.	1	
2	.	.	.	1	.	.	
3	.	.	.	.	.	.	
4	.	.	.	1	.	.	
5	.	.	.	2	.	.	
6	5	.	.	.	.	.	
7	.	.	.	1	.	.	
8	.	.	1	.	.	.	
9	1	.	.	1	.	.	
10	2	.	1	5	.	2	
11	.	.	.	.	.	.	
12	.	.	.	.	.	.	
13	.	.	.	.	.	.	
14	.	.	.	.	.	.	
15	.	.	.	.	.	1	
16	.	.	.	.	.	.	LMI
17	.	.	.	.	.	1	
18	.	.	.	.	.	.	
19	.	.	.	2	.	.	
20	.	.	.	.	.	.	
21	.	1	.	.	.	.	
22	.	.	.	.	.	1	
23	.	.	.	.	.	.	
24	.	.	.	.	.	1	
25	.	.	.	.	.	.	
26	.	2	1	1	.	.	
27	.	.	.	.	.	.	
28	.	.	.	.	.	.	
29	3	.	.	1	.	.	
30	.	.	.	.	.	.	
31	.	.	.	.	.	.	
32	.	.	.	.	.	.	
33	.	.	.	.	.	.	
34	.	.	2	.	.	.	
35	1	.	.	.	.	1	
36	.	.	.	1	.	.	
37	.	.	.	.	.	.	
38	.	.	1	.	.	.	
39	2	.	.	.	.	.	
40	.	.	.	3	.	1	
41	3	.	.	.	.	.	
42	.	.	.	1	.	.	
43	.	.	.	1	.	.	
44	.	.	.	.	.	.	
45	.	.	.	.	.	.	nvc
46	.	.	.	.	.	.	cal
47	.	.	.	.	.	.	cal
48	.	.	1	.	.	.	ast
49	.	.	.	.	.	.	cal

W	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
50	1	Mammal	Bos taurus	TAR	co	F	ND	R	2	.	.
51	2	Mammal	Bos taurus	RAD	psh	F	ND	R	2	.	1
52	1	Mammal	Bos taurus	RAD	ds	ND	F	L	.	.	.
53	1	Mammal	Bos taurus	HUM	pse	U	ND	R	.	.	.
54	1	Mammal	Bos taurus	TAR	co	F	ND	R	1	.	.
55	1	Mammal	Bos taurus	FEM	dsh	ND	F	L	1	.	1
56	3	Mammal	Bos taurus	TIB	sh	ND	ND	R	3	.	2
57	1	Mammal	Bos taurus	TIB	dsh	ND	F	R	1	.	1
58	1	Mammal	Bos taurus	TIB	sh	ND	ND	L	3	.	1
59	3	Mammal	Bos taurus	TIB	px	U	ND	L	2	.	.
60	2	Mammal	Bos taurus	TIB	px	U	ND	R	2	.	.
61	2	Mammal	Bos taurus	TIB	ds	ND	F	R	.	.	2
62	1	Mammal	Bos taurus	FEM	dse	ND	U	L	.	.	1
63	2	Mammal	Bos taurus	CAR	fr	ND	ND	R	.	.	.
64	1	Mammal	Bos taurus	FEM	dse	ND	U	L	.	.	1
65	1	Mammal	Bos taurus	FEM	ds	ND	U	R	3	.	.
66	2	Mammal	Bos taurus	FEM	dsh	ND	F	R	1	.	.
67	1	Mammal	Bos taurus	RAD	sh	ND	ND	L	2	.	1
68	1	Mammal	Bos taurus	FEM	sh	ND	ND	U	.	.	1
69	1	Mammal	Bos taurus	ISC	fr	ND	ND	L	2	.	1
70	1	Mammal	Bos taurus	ACE	fr	ND	ND	U	3	.	.
71	1	Mammal	Bos taurus	ILM	sh	ND	ND	L	1	.	1
72	2	Mammal	Bos taurus	ILM	sh	ND	ND	L	.	.	2
73	2	Mammal	Bos taurus	FEM	sh	ND	ND	R	3	.	2
74	3	Mammal	Bos taurus	DEN	fr	ND	ND	U	.	.	.
75	1	Mammal	Bos taurus	FEM	sh	ND	ND	L	3	.	.
76	1	Mammal	Bos taurus	ISC	fr	ND	ND	L	.	.	.
77	1	Mammal	Bos taurus	ACE	fr	F	ND	L	.	.	1
78	1	Mammal	Bos taurus	ACE	fr	ND	ND	U	3	.	.
79	2	Mammal	Bos taurus	FEM	pse	ND	ND	L	1	.	1
80	1	Mammal	Bos taurus	ISC	fr	ND	ND	R	1	.	1
81	1	Mammal	Bos taurus	FEM	dse	ND	U	R	.	.	1
82	2	Mammal	Bos taurus	RAD	psh	F	ND	L	2	.	1
83	1	Mammal	Bos taurus	RAD	cp	F	U	L	4	.	1
84	3	Mammal	Bos taurus	ILM	sh	ND	ND	R	2	.	2
85	2	Mammal	Bos taurus	PHA1	fr	ND	F	LLMR	1	.	.
86	2	Mammal	Bos taurus	ISC	fr	ND	ND	R	.	.	1
87	1	Mammal	Bos taurus	ILM	sh	ND	ND	R	1	.	1
88	1	Mammal	Sus scrofa	FEM	dse	ND	U	L	.	.	.
89	1	Mammal	Sus scrofa	FEM	pse	U	ND	L	.	.	.
90	1	Mammal	Sus scrofa	ACE	fr	F	ND	L	.	.	1
91	1	Mammal	Sus scrofa	INN	fr	F	ND	L	.	.	.
92	1	Mammal	Sus scrofa	CRA	fr	ND	ND	L	1	.	.
93	2	Mammal	Sus scrofa	DEN	inf	F	ND	A	2	.	.
94	2	Mammal	Sus scrofa	CRA	fr	ND	ND	R	.	.	.
95	2	Mammal	Sus scrofa	ISC	fr	ND	ND	L	1	.	.
96	1	Mammal	Sus scrofa	PUB	fr	ND	ND	R	.	.	.
97	1	Mammal	Sus scrofa	ILM	fr	ND	F	R	.	.	.
98	2	Mammal	Sus scrofa	ISC	fr	ND	ND	R	.	.	.

W	CT	CH	SH	SW	RD	CN	Comments
50	.	.	.	.	.	.	copper contact, cal
51	.	.	1	.	.	1	
52	.	.	.	.	.	.	
53	.	.	.	.	.	.	
54	.	.	.	.	.	.	cal
55	8	.	.	2	.	.	
56	6	.	.	2	.	1	
57	.	.	2	.	.	.	
58	.	.	.	2	.	.	
59	.	.	.	.	.	1	mne=1
60	.	.	.	.	.	2	
61	.	.	.	3	.	.	
62	.	.	.	1	.	.	
63	.	.	.	.	.	1	
64	.	.	.	1	.	.	
65	.	.	.	.	.	1	
66	.	.	.	.	.	2	
67	.	.	.	2	.	.	
68	.	.	.	1	.	.	
69	.	.	.	1	.	.	
70	.	.	.	.	.	.	
71	1	.	.	1	.	.	
72	.	.	.	4	.	.	
73	.	.	.	.	.	1	
74	.	.	.	.	.	.	
75	.	.	.	.	.	.	
76	.	.	.	.	.	1	
77	.	.	.	2	.	.	
78	.	.	.	.	.	.	
79	.	.	.	2	.	.	
80	.	.	.	1	.	1	
81	1	.	.	.	.	1	very young
82	.	.	.	1	.	.	
83	5	.	.	.	.	.	
84	.	.	.	3	.	1	
85	.	.	.	.	.	.	
86	.	.	.	2	.	.	
87	.	.	.	2	.	.	
88	.	.	.	.	1	.	
89	.	.	.	.	.	.	
90	1	.	.	.	.	.	
91	.	.	.	.	.	1	
92	.	.	.	.	.	.	SQA
93	.	.	.	.	.	.	
94	.	.	.	.	.	.	SQA
95	.	.	.	.	.	.	
96	.	.	.	.	.	.	
97	.	.	.	.	.	.	
98	.	.	.	.	.	1	

W	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
99	1	Mammal	Sus scrofa	PUB	fr	ND	ND	L	2	.	.
100	1	Mammal	Sus scrofa	ILM	fr	ND	F	L	1	.	1
101	1	Mammal	Sus scrofa	SCP	dsh	ND	F	R	.	.	.
102	1	Mammal	Sus scrofa	SCP	dsh	ND	F	L	3	.	1
103	1	Mammal	Sus scrofa	MET	sh	ND	ND	U	.	.	.
104	2	Mammal	Sus scrofa	FEM	sh	ND	ND	R	3	.	2
105	1	Mammal	Sus scrofa	MC	psh	F	ND	R	1	.	.
106	1	Mammal	Sus scrofa	DENT	mid	ND	ND	L	1	.	.
107	27	Mammal	Sus scrofa	TTH	fr	ND	ND	U	.	.	.
108	2	Mammal	Sus scrofa	DEN	fr	ND	ND	U	2	.	.
109	2	Mammal	Sus scrofa	MAXT	fr	ND	ND	R	1	.	.
110	2	Mammal	Sus scrofa	DENT	mid	ND	ND	R	2	.	.
111	2	Mammal	Sus scrofa	DENT	fr	ND	ND	R	.	.	.
112	1	Mammal	Sus scrofa	TAR	px	U	ND	L	.	.	.
113	1	Mammal	Sus scrofa	PAT	dse	ND	U	R	.	.	1
114	2	Mammal	Sus scrofa	RIB	sup	ND	ND	L	.	.	.
115	2	Mammal	Sus scrofa	RIB	sup	ND	ND	L	.	.	.
116	1	Mammal	Sus scrofa	ATL	fr	ND	ND	A	.	.	.
117	1	Mammal	Sus scrofa	PHA2	fr	U	ND	U	.	.	.
118	1	Mammal	Sus scrofa	RAD	sh	ND	ND	L	3	.	.
119	1	Mammal	Sus scrofa	FIB	sh	ND	ND	U	1	.	.
120	1	Mammal	Sus scrofa	RAD	dse	ND	U	L	.	.	.
121	1	Mammal	Sus scrofa	HUM	sh	ND	ND	R	3	.	.
122	1	Mammal	Sus scrofa	HUM	dse	ND	U	L	2	.	.
123	2	Mammal	Sus scrofa	RIB	mid	ND	ND	L	1	.	1
124	1	Mammal	Sus scrofa	RIB	mid	ND	ND	L	.	.	1
125	1	Mammal	Sus scrofa	HUM	dse	ND	U	L	1	1	2
126	1	Mammal	Sus scrofa	ULN	sh	ND	ND	L	1	.	.
127	1	Mammal	Sus scrofa	RIB	sup	ND	ND	L	1	.	.
128	1	Mammal	Sus scrofa	HUM	dsh	ND	F	L	3	.	1
129	1	Mammal	Ovis/Capra	SCP	mid	ND	ND	R	.	.	.
130	1	Mammal	Ovis/Capra	CRA	fr	ND	ND	A	1	.	.
131	1	Mammal	Ovis/Capra	TIB	sh	ND	ND	L	3	.	1
132	1	Mammal	Ovis/Capra	FEM	cs	U	ND	L	.	.	1
133	1	Mammal	Ovis/Capra	TIB	sh	ND	ND	R	3	.	1
134	1	Mammal	Ovis/Capra	TIB	sh	ND	ND	L	2	.	1
135	1	Mammal	Ovis/Capra	HUM	dse	ND	ND	R	2	.	.
136	1	Mammal	Ovis/Capra	HUM	ds	ND	F	L	1	.	.
137	1	Mammal	Ovis/Capra	SAC	ant	ND	ND	A	3	.	.
138	1	Mammal	Ovis/Capra	MC	sh	ND	ND	U	1	.	.
139	1	Mammal	Ovis/Capra	MT	sh	ND	ND	U	.	.	1
140	1	Mammal	Ovis/Capra	RAD	px	F	ND	U	2	.	.
141	1	Mammal	medium	RIB	sup	ND	ND	R	.	.	.
142	1	Mammal	medium	RIB	sup	ND	ND	R	2	.	.
143	1	Mammal	medium	RIB	mid	ND	ND	R	.	.	.
144	2	Mammal	medium	CRA	fr	ND	ND	A	.	.	.
145	1	Mammal	medium	DEN	fr	ND	ND	U	1	.	.
146	2	Mammal	medium	SCP	fr	ND	ND	U	.	.	.
147	3	Mammal	medium	SCP	fr	ND	ND	U	1	.	.

W	CT	CH	SH	SW	RD	CN	Comments
99	.	.	.	.	.	.	
100	.	.	1	.	.	.	
101	.	.	.	.	.	1	
102	.	.	1	.	.	1	
103	.	.	.	.	.	.	
104	5	.	.	.	.	1	
105	.	.	.	.	1	.	III
106	.	.	.	.	.	.	
107	.	.	.	.	.	.	upper and lower
108	.	.	.	.	.	.	
109	.	.	.	.	.	.	
110	.	.	.	.	.	.	
111	.	.	.	.	.	.	
112	.	.	.	.	.	.	cal
113	.	.	.	1	.	.	
114	.	.	.	.	.	.	
115	.	.	.	.	.	.	
116	.	.	.	.	.	.	
117	.	.	.	.	.	.	
118	.	.	.	.	.	.	
119	.	.	.	.	.	.	
120	.	.	.	.	.	.	
121	.	.	.	.	.	1	
122	.	.	.	.	.	1	
123	4	.	.	.	.	.	
124	1	.	.	.	.	.	
125	.	.	.	.	.	.	baby pig
126	.	.	.	.	.	.	
127	.	.	.	.	.	.	
128	1	.	.	.	.	.	
129	.	.	.	.	.	.	mend
130	.	.	.	.	.	.	
131	.	3	.	.	.	.	
132	3	.	.	.	.	1	
133	1	1	.	.	.	.	
134	.	1	1	.	.	1	
135	.	.	.	.	.	1	
136	.	.	.	.	.	.	
137	.	.	.	.	.	.	
138	.	.	.	.	.	.	
139	.	.	.	1	.	1	
140	.	.	.	.	.	.	
141	.	.	.	.	.	.	
142	.	.	.	.	.	.	
143	.	.	.	.	.	.	
144	.	.	.	.	.	.	
145	.	.	.	.	.	.	
146	.	.	.	.	.	.	
147	.	.	.	.	.	.	

W	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
148	42	Mammal	medium	LBN	sh	ND	ND	U	.	.	2
149	28	Mammal	medium	LBN	sh	ND	ND	U	1	.	5
150	2	Mammal	medium	THO	sup	ND	ND	A	1	.	.
151	2	Mammal	medium	VRT	fr	ND	ND	A	.	.	.
152	31	Mammal	medium	LBN	sh	ND	ND	U	2	.	4
153	1	Mammal	medium	VRT	fr	ND	ND	A	2	.	1
154	5	Mammal	medium	RIB	mid	ND	ND	R	1	.	.
155	1	Mammal	medium	RIB	mid	ND	ND	R	2	.	.
156	11	Mammal	medium	LBN	sh	ND	ND	U	3	.	1
157	4	Mammal	md/large	RIB	mid	ND	ND	U	.	.	.
158	3	Mammal	md/large	RIB	mid	ND	ND	U	3	.	.
159	1	Mammal	md/large	RIB	inf	ND	ND	U	.	.	.
160	3	Mammal	md/large	RIB	mid	ND	ND	U	.	.	3
161	2	Mammal	md/large	LBN	sh	ND	ND	U	3	.	1
162	2	Mammal	md/large	SCP	fr	ND	ND	U	.	.	1
163	2	Mammal	md/large	LBN	sh	ND	ND	U	2	.	.
164	1	Mammal	md/large	LBN	sh	ND	ND	U	.	.	.
165	1	Mammal	md/large	LBN	sh	ND	ND	U	1	.	1
166	13	Mammal	large	LBN	sh	ND	ND	U	1	.	10
167	9	Mammal	large	RIB	mid	ND	ND	U	2	.	4
168	16	Mammal	large	RIB	mid	ND	ND	U	.	.	4
169	13	Mammal	large	RIB	mid	ND	ND	U	1	.	4
170	1	Mammal	large	VRT	fr	ND	ND	A	2	.	.
171	2	Mammal	large	VRT	fr	ND	ND	A	3	.	.
172	3	Mammal	large	VRT	fr	ND	ND	A	1	.	2
173	4	Mammal	large	PEL	fr	ND	ND	U	.	.	.
174	8	Mammal	large	LBN	sh	ND	ND	U	.	.	3
175	6	Mammal	large	RIB	mid	ND	ND	U	3	.	1
176	1	Mammal	large	RIB	sup	F	ND	L	.	.	1
177	1	Mammal	large	RIB	sup	ND	ND	R	3	.	.
178	3	Mammal	large	RIB	sup	ND	ND	L	1	.	.
179	1	Mammal	large	RIB	sup	F	ND	L	2	.	1
180	1	Mammal	large	LBN	sh	ND	ND	U	.	4	.
181	2	Mammal	large	SCP	mid	ND	ND	U	.	.	.
182	11	Mammal	large	LBN	sh	ND	ND	U	3	.	2
183	4	Mammal	large	RIB	sup	F	ND	R	3	.	3
184	2	Mammal	large	RIB	mid	ND	ND	R	3	.	1
185	2	Mammal	large	RIB	mid	ND	ND	R	.	.	2
186	3	Mammal	large	LBN	sh	ND	ND	U	2	.	.
187	2	Mammal	large	RIB	mid	ND	ND	L	.	.	2
188	2	Mammal	large	RIB	mid	ND	ND	L	2	.	.
189	1	Mammal	large	RIB	mid	ND	ND	L	3	.	1
190	2	Mammal	large	RIB	mid	ND	ND	L	1	.	.
191	1	Bird	Gallus gallus	TBT	sh	ND	ND	R	.	.	.
192	1	Bird	Gallus gallus	ULN	dsh	ND	F	L	.	.	.
193	1	Bird	Gallus gallus	TBT	px	F	ND	R	.	.	.
194	1	Bird	Gallus gallus	TBT	pse	U	ND	R	.	.	.
195	4	Bird	Gallus gallus	STE	fr	F	ND	A	.	.	.
196	1	Bird	Gallus gallus	TBT	sh	ND	ND	L	.	.	.



W	CT	CH	SH	SW	RD	CN	Comments
148	3	.	.	1	.	2	
149	2	1	.	3	.	4	
150	.	.	.	.	.	.	
151	.	.	.	.	.	.	
152	3	.	.	2	.	2	
153	1	.	.	.	.	.	
154	.	.	.	.	.	.	
155	.	.	.	.	.	.	
156	.	.	.	1	.	2	
157	.	.	.	.	.	.	
158	.	.	.	.	.	.	
159	.	.	.	.	.	.	
160	.	1	1	1	.	.	
161	.	.	.	1	.	.	
162	.	.	.	1	.	.	
163	.	.	.	.	.	.	
164	.	.	.	.	.	.	
165	.	.	.	1	.	.	
166	1	.	.	12	.	.	
167	2	.	1	3	.	1	
168	4	.	.	2	.	1	
169	2	.	.	2	.	.	
170	.	.	.	.	.	.	
171	.	.	.	.	.	1	
172	.	.	1	2	.	.	
173	.	.	.	.	.	.	
174	4	.	.	1	.	.	
175	.	.	.	1	.	.	
176	.	.	1	.	.	.	
177	.	.	.	.	.	.	
178	.	.	.	.	.	1	
179	.	.	1	.	.	1	
180	.	.	.	.	.	.	
181	.	.	.	.	.	.	
182	3	.	.	1	.	1	
183	.	1	1	1	.	1	
184	.	.	.	1	.	1	
185	.	.	.	2	.	.	
186	.	.	.	.	.	.	
187	4	.	.	2	.	1	
188	.	.	.	.	.	.	
189	3	.	.	.	.	.	
190	.	.	.	.	.	.	
191	.	.	.	.	.	.	
192	.	.	.	.	.	.	
193	.	.	.	.	.	.	
194	.	.	.	.	.	.	
195	.	.	.	.	.	.	mne=1
196	.	.	.	.	.	.	

W	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
197	1	Bird	Gallus gallus	SCP	ant	F	ND	L	.	.	.
198	1	Bird	Gallus gallus	SCP	ant	F	ND	R	.	.	.
199	1	Bird	Gallus gallus	ULN	psh	F	F	R	.	.	.
200	1	Bird	Gallus gallus	FEM	dsh	ND	F	L	.	.	.
201	1	Bird	Gallus gallus	TMT	co	F	F	R	.	.	.
202	1	Bird	Gallus gallus	HUM	ds	ND	F	L	.	.	.
203	1	Mammal	Felis domesticus	ULN	psh	F	ND	L	.	.	.
204	1	Bird	unid	RIB	fr	ND	ND	U	.	.	.
205	43	Bird	unid	LBN	sh	ND	ND	U	.	.	.
206	1	Bird	unid	PHAP	fr	ND	ND	U	.	.	.
207	2	Bird	unid	LBN	sh	ND	ND	U	.	.	.
208	4	Bird	unid	SYN	fr	ND	ND	A	.	.	.
209	4	Bird	unid	NID	fr	ND	ND	U	.	.	.
210	6	UNID	unid	NID	fr	ND	ND	U	.	4	.
211	10	Mammal	unid	CRA	fr	ND	ND	A	.	.	.
212	1	Mammal	unid	NID	fr	ND	ND	U	.	1	.
213	23	Fish	unid	NID	fr	ND	ND	U	.	.	1
214	.	Mammal	unid	OTH	fr	ND	ND	U	.	.	.
215	34	Mammal	unid	NID	fr	ND	ND	U	2	.	4
216	18	Mammal	unid	NID	fr	ND	ND	U	3	.	.
217	43	Mammal	unid	NID	fr	ND	ND	U	1	.	6
218	81	UNID	unid	NID	fr	ND	ND	U	.	.	.
219	178	Mammal	unid	NID	fr	ND	ND	U	.	.	7
220	1	Mammal	Rodentia	FEM	sh	ND	ND	R	.	.	.
221	1	Bird	Corvus sp.	CRA	ant	ND	ND	A	.	.	.
222	1	Bird	Branta canadensis	RAD	dsh	ND	F	R	.	.	.
223	1	Bird	Anatidae	HUM	sh	ND	ND	R	.	.	.
224	1	Bird	Anatidae	TBT	sh	ND	ND	L	.	.	.
225	1	Bird	Meleagris gallopavo	HUM	sh	ND	ND	R	.	.	.
226	1	Bird	Meleagris gallopavo	HUM	psh	F	ND	R	.	.	.
227	1	Bird	Meleagris gallopavo	TBT	sh	ND	F	L	.	.	.
228	1	Bird	Meleagris gallopavo	HUM	px	F	ND	L	.	.	.
229	1	Mammal	Odocoileus v.	TIB	sh	ND	ND	R	3	.	.
230	9	Reptile	Emydidae	OTH	fr	ND	ND	U	.	.	2
231	68	Reptile	Testudinata	OTH	fr	ND	ND	U	.	.	.
232	1	Mammal	O. aries	RAD	psh	F	ND	R	.	.	1
233	1	Mammal	O. aries	DENT	fr	ND	ND	L	.	.	.
234	2	Mammal	O. aries	RAD	psh	F	ND	L	2	.	.
235	1	Mammal	O. aries	TIB	dsh	ND	F	R	1	.	1
236	1	Mammal	O. aries	TAR	co	U	ND	R	.	.	.

N	CT	CH	SH	SW	RD	CN	Comments
97	.	.	.	.	.	.	
98	.	.	.	.	.	.	
99	.	.	.	.	.	.	
200	.	.	.	.	.	1	medullary bone
201	.	.	.	.	.	.	
202	.	.	.	.	.	.	
203	.	.	.	.	.	.	
204	.	.	.	.	.	.	
205	.	.	.	.	.	.	
206	.	.	.	.	.	.	
207	.	.	.	.	.	.	
208	.	.	.	.	.	.	
209	.	.	.	.	.	.	
210	.	.	.	.	.	.	
211	.	.	.	.	.	.	
212	.	.	.	.	.	.	
213	4	.	.	.	.	.	cranial and post-cra.
214	.	.	.	.	.	.	488 exfoliated frags/ 98.5g
215	.	.	2	2	.	.	
216	.	.	.	.	.	.	
217	1	.	1	4	.	.	
218	.	.	.	.	.	.	
219	5	.	.	4	.	1	1 copper contact
220	.	.	.	.	.	.	
221	.	.	.	.	.	.	maxilla
222	.	.	.	.	.	.	
223	.	.	.	.	.	.	small duck
224	.	.	.	.	.	.	small duck
225	.	.	.	.	.	.	
226	.	.	.	.	.	1	
227	.	.	.	.	.	1	
228	.	.	.	.	.	.	
229	.	.	.	.	.	.	
230	7	.	.	.	.	.	cf. Malaclemys terrapin
231	.	.	.	.	.	.	
232	.	.	1	.	.	.	
233	.	.	.	.	.	1	c6-12 mo.
234	.	.	.	.	.	2	
235	.	.	1	.	.	.	
236	.	.	.	.	.	.	cal

APPENDIX  
VIAPPENDIX  
VIIAPPENDIX  
VIIIAPPENDIX  
IV

V

R	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
1	1	Mammal	Bos taurus	RAD	dsh	ND	F	L	•	•	1
2	1	Mammal	Bos taurus	RAD	sh	ND	ND	L	3	•	•
3	2	Mammal	Bos taurus	RIB	sup	ND	ND	R	•	•	2
4	3	Mammal	Bos taurus	RIB	mid	ND	ND	R	•	•	2
5	3	Mammal	Bos taurus	RIB	mid	ND	ND	R	1	•	3
6	1	Mammal	Bos taurus	RAD	sh	ND	ND	R	•	•	1
7	1	Mammal	Bos taurus	TIB	pse	U	ND	R	3	•	•
8	1	Mammal	Bos taurus	TIB	sh	ND	ND	L	2	•	1
9	1	Mammal	Bos taurus	PAT	co	ND	ND	L	•	•	•
10	1	Mammal	Bos taurus	ILM	mid	ND	ND	L	•	•	1
11	3	Mammal	Bos taurus	SCP	mid	ND	ND	R	1	•	3
12	2	Mammal	Bos taurus	RIB	sup	ND	ND	R	1	•	2
13	1	Mammal	Bos taurus	RIB	sup	ND	ND	L	1	•	1
14	5	Mammal	Bos taurus	RIB	sup	ND	ND	L	•	•	4
15	1	Mammal	Bos taurus	RIB	sup	ND	ND	L	3	•	1
16	1	Mammal	Bos taurus	ULN	ds	ND	ND	L	2	•	1
17	1	Mammal	Bos taurus	ULN	ds	ND	ND	R	•	•	1
18	1	Mammal	Bos taurus	RIB	mid	ND	ND	L	2	•	1
19	1	Mammal	Bos taurus	RIB	mid	ND	ND	U	2	•	1
20	1	Mammal	Bos taurus	RIB	mid	ND	ND	U	4	•	1
21	5	Mammal	Bos taurus	RIB	mid	ND	ND	U	1	•	3
22	1	Mammal	Bos taurus	RIB	mid	ND	ND	L	•	•	1
23	11	Mammal	Bos taurus	RIB	mid	ND	ND	U	•	•	4
24	1	Mammal	Bos taurus	TIB	cs	ND	U	L	3	•	•
25	1	Mammal	Bos taurus	TTH	fr	ND	ND	R	•	•	•
26	2	Mammal	Bos taurus	HUM	dsh	ND	F	R	1	•	2
27	1	Mammal	Bos taurus	HUM	sh	ND	ND	U	•	•	1
28	5	Mammal	Bos taurus	THO	sup	ND	ND	A	•	•	2
29	1	Mammal	Bos taurus	LUM	hfl	U	U	A	•	•	1
30	1	Mammal	Bos taurus	SAC	fr	ND	ND	A	•	•	1
31	4	Mammal	Bos taurus	LUM	fr	ND	ND	A	•	•	4
32	1	Mammal	Sus scrofa	HUM	sh	ND	ND	L	3	•	•
33	1	Mammal	Sus scrofa	RAD	sh	ND	ND	L	•	•	•
34	8	Mammal	Sus scrofa	HUM	sh	ND	ND	L	2	•	4
35	1	Mammal	Sus scrofa	HUM	sh	ND	ND	L	1	•	•
36	1	Mammal	Sus scrofa	HUM	dsh	ND	E	L	1	•	1
37	1	Mammal	Sus scrofa	HUM	px	U	ND	L	•	•	•
38	5	Mammal	Sus scrofa	HUM	dse	ND	U	L	2	•	3
39	1	Mammal	Sus scrofa	RAD	psh	F	ND	L	•	•	1
40	2	Mammal	Sus scrofa	HUM	sh	ND	ND	R	3	•	•
41	2	Mammal	Sus scrofa	HUM	sh	ND	ND	R	2	•	2
42	1	Mammal	Sus scrofa	LUM	fr	U	ND	A	•	•	1
43	1	Mammal	Sus scrofa	AXI	hfl	F	U	A	•	•	1
44	2	Mammal	Sus scrofa	HUM	sh	ND	ND	R	•	•	•
45	2	Mammal	Sus scrofa	HUM	dse	ND	U	R	•	•	2
46	2	Mammal	Sus scrofa	HUM	sh	ND	ND	R	1	•	•
47	3	Mammal	Sus scrofa	HUM	sh	ND	ND	R	1	•	3
48	1	Mammal	Sus scrofa	RAD	sh	ND	ND	R	•	•	•
49	2	Mammal	Sus scrofa	SCP	mid	ND	ND	L	•	•	2

R	CT	CH	SH	SW	RD	CN	Comments
1	.	.	.	1	.	.	
2	.	.	.	.	.	1	calf
3	.	.	.	2	.	1	
4	.	.	.	3	.	.	green discolor
5	.	1	1	3	.	.	
6	.	.	.	2	.	.	
7	.	.	.	.	.	.	calf
8	.	.	.	2	.	.	
9	.	.	.	.	.	.	
10	.	.	.	2	.	.	
11	.	.	.	7	.	1	
12	.	.	.	3	.	.	
13	.	.	1	.	.	.	
14	2	.	.	6	1	2	
15	.	.	.	1	.	.	
16	.	.	.	1	.	.	
17	.	.	.	2	.	.	rust stained
18	.	.	.	1	.	1	
19	.	.	.	1	.	.	
20	.	.	.	1	.	.	
21	.	.	.	4	.	.	
22	.	.	.	3	.	.	
23	.	.	.	4	.	.	1 rust stained
24	.	.	.	.	.	1	
25	.	.	.	.	.	.	DUP4:d calf
26	4	.	.	2	1	1	arm roasts
27	.	.	.	2	.	.	thin steak
28	.	.	.	2	.	3	1 rust stained
29	.	.	1	.	.	.	
30	.	.	.	2	.	.	thin steak
31	.	.	.	6	.	1	thin steaks
32	.	.	.	.	.	.	
33	.	.	.	.	.	.	
34	10	.	.	.	.	8	1 rust stained
35	.	.	.	.	.	1	
36	3	.	.	.	.	1	
37	.	.	.	.	.	1	
38	17	.	.	.	.	5	
39	.	.	1	.	.	1	
40	.	.	.	.	.	2	
41	3	.	.	.	.	2	
42	.	.	1	.	.	.	
43	.	.	1	.	.	1	
44	.	.	.	.	.	2	
45	4	.	.	.	.	2	
46	.	.	.	.	.	2	
47	5	.	.	.	.	2	
48	.	.	.	.	.	.	
49	.	.	1	1	.	2	

R	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
50	1	Mammal	Sus scrofa	SCP	ds	ND	U	L	.	.	.
51	1	Mammal	Sus scrofa	SCP	dse	ND	ND	R	.	.	1
52	1	Mammal	Sus scrofa	MT	psh	F	ND	R	.	.	.
53	1	Mammal	Sus scrofa	ILM	fr	ND	U	R	.	.	1
54	2	Mammal	Sus scrofa	TTH	fr	ND	ND	U	.	.	.
55	1	Mammal	Sus scrofa	DENT	mid	ND	ND	R	.	.	.
56	1	Mammal	Sus scrofa	MAXT	pos	ND	ND	L	.	.	.
57	1	Mammal	Sus scrofa	TTH	fr	ND	ND	L	.	.	.
58	1	Mammal	Sus scrofa	DENT	mid	ND	ND	L	.	.	.
59	1	Mammal	Sus scrofa	MT	psh	F	ND	L	.	.	.
60	1	Mammal	Sus scrofa	MET	sh	ND	ND	U	.	.	.
61	1	Mammal	Sus scrofa	MC	psh	F	ND	L	.	.	1
62	2	Mammal	Sus scrofa	MC	psh	F	ND	L	.	.	.
63	1	Mammal	Sus scrofa	MT	psh	F	ND	L	.	.	.
64	1	Mammal	Sus scrofa	MC	psh	F	ND	L	.	.	.
65	1	Mammal	Sus scrofa	MC	cp	F	U	R	.	.	.
66	1	Mammal	Sus scrofa	MT	psh	F	ND	L	.	.	.
67	1	Mammal	Sus scrofa	MET	ds	ND	U	U	.	.	.
68	1	Mammal	Sus scrofa	MC	psh	F	ND	L	.	.	.
69	1	Mammal	Sus scrofa	TIB	sh	ND	ND	R	2	.	.
70	1	Mammal	Sus scrofa	TIB	sh	ND	ND	L	2	.	.
71	1	Mammal	Sus scrofa	TAR	co	ND	ND	R	.	.	.
72	1	Mammal	Sus scrofa	PHA1	cd	U	ND	LLMR	.	.	.
73	1	Mammal	Sus scrofa	TAR	fr	ND	ND	L	.	.	.
74	2	Mammal	Sus scrofa	FEM	sh	ND	ND	L	.	.	1
75	1	Mammal	Sus scrofa	FEM	pse	U	ND	L	.	.	1
76	1	Mammal	Sus scrofa	FEM	sh	ND	ND	L	1	.	1
77	1	Mammal	Sus scrofa	FEM	dse	ND	U	R	3	.	1
78	2	Mammal	Sus scrofa	FEM	sh	ND	ND	L	2	.	2
79	2	Mammal	Sus scrofa	RIB	mid	ND	ND	U	.	.	1
80	1	Mammal	Sus scrofa	RIB	sup	ND	ND	L	1	.	1
81	3	Mammal	Sus scrofa	RIB	sup	ND	ND	R	.	.	1
82	3	Mammal	Sus scrofa	RIB	mid	ND	ND	R	.	.	1
83	4	Mammal	Sus scrofa	RIB	mid	ND	ND	L	.	.	1
84	2	Mammal	Sus scrofa	RIB	sup	ND	ND	R	1	.	.
85	1	Mammal	Sus scrofa	ULN	sh	ND	ND	R	.	1	.
86	2	Mammal	Sus scrofa	ULN	fr	U	ND	L	.	.	.
87	1	Mammal	Sus scrofa	RIB	inf	ND	ND	R	.	.	.
88	1	Mammal	Ovis/Capra	TIB	dse	ND	ND	L	.	.	.
89	1	Mammal	Ovis/Capra	ISC	fr	ND	ND	L	.	.	.
90	1	Mammal	Ovis/Capra	ILM	fr	ND	ND	L	.	.	.
91	2	Mammal	Ovis/Capra	SCP	fr	ND	ND	L	.	.	.
92	2	Mammal	Ovis/Capra	TIB	pse	U	ND	L	.	.	1
93	1	Mammal	Ovis/Capra	FEM	cd	ND	F	R	1	.	1
94	3	Mammal	Ovis/Capra	FEM	cs	ND	ND	R	.	.	3
95	1	Mammal	Ovis/Capra	HUM	sh	ND	ND	R	2	.	1
96	1	Mammal	Ovis/Capra	HUM	sh	ND	U	L	.	.	.
97	1	Mammal	Ovis/Capra	PUB	fr	ND	ND	R	.	.	1
98	1	Mammal	Ovis/Capra	ILM	fr	ND	F	R	.	.	.

R	CT	CH	SH	SW	RD	CN	Comments
50	•	•	•	•	•	1	
51	•	•	•	1	•	1	
52	•	•	•	•	•	•	II
53	•	•	•	1	•	•	
54	•	•	•	•	•	•	canine frags
55	•	•	•	•	•	•	LM2:c 1.5yr?
56	•	•	•	•	•	•	UM3:E 1.5yr
57	•	•	•	•	•	•	UM2:d 1.5yr?
58	•	•	•	•	•	•	LM1:b 8mo?
59	•	•	•	•	•	1	IV
60	•	•	•	•	•	•	
61	•	•	1	•	•	1	III
62	•	•	•	•	•	1	1 green discolor
63	•	•	•	•	•	•	
64	•	•	•	•	•	•	II
65	•	•	•	•	•	•	II
66	•	•	•	•	•	•	V
67	•	•	•	•	•	•	
68	•	•	•	•	•	•	V
69	•	•	•	•	•	1	
70	•	•	•	•	•	1	
71	•	•	•	•	•	•	ast
72	•	•	•	•	•	•	
73	•	•	•	•	•	•	cal
74	20	•	•	•	•	1	
75	•	•	•	1	•	•	
76	8	•	•	•	•	1	
77	2	•	•	•	•	1	rust stained
78	10	•	•	•	•	2	
79	•	•	1	•	•	•	
80	•	•	•	1	•	•	
81	•	•	1	•	•	1	
82	•	•	1	•	•	•	
83	•	•	2	•	•	•	
84	•	•	•	•	•	•	
85	•	•	•	•	•	•	
86	•	•	•	•	•	1	
87	•	•	•	•	•	•	
88	•	•	•	•	•	1	
89	•	•	•	•	•	1	
90	•	•	•	•	•	•	
91	•	•	•	•	•	2	
92	•	•	1	•	•	1	
93	3	•	•	•	•	1	
94	26	1	•	•	•	3	
95	8	•	•	•	•	1	
96	•	•	•	•	•	1	
97	•	•	•	1	•	•	female
98	•	•	•	•	•	•	female

	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
99	1	Mammal	Ovis/Capra	FEM	cs	ND	ND	R	1	.	1
100	1	Mammal	medium	FEM	sh	ND	ND	U	2	.	1
101	1	Mammal	medium	LBN	sh	ND	ND	U	1	.	1
102	1	Mammal	medium	LBN	sh	ND	ND	U	.	.	1
103	4	Mammal	medium	VRT	fr	ND	ND	A	.	.	2
104	2	Mammal	medium	RIB	mid	ND	ND	U	1	.	1
105	1	Mammal	medium	RIB	inf	ND	ND	U	.	.	1
106	1	Mammal	medium	RIB	mid	ND	ND	R	1	.	.
107	6	Mammal	medium	RIB	mid	ND	ND	U	.	.	1
108	41	Mammal	medium	LBN	sh	ND	ND	U	.	.	4
109	14	Mammal	medium	LBN	sh	ND	ND	U	1	.	5
110	1	Mammal	medium	RIB	mid	ND	ND	U	2	.	.
111	1	Mammal	medium	THO	sup	ND	ND	A	.	.	1
112	1	Mammal	medium	SCP	fr	ND	ND	U	.	.	.
113	10	Mammal	medium	LBN	sh	ND	ND	U	2	.	2
114	1	Mammal	medium	LBN	sh	ND	ND	U	2	.	.
115	1	Mammal	medium	LBN	sh	ND	ND	U	3	.	.
116	1	Mammal	medium	RIB	mid	ND	ND	L	1	.	.
117	1	Mammal	medium	RIB	mid	ND	ND	L	.	.	.
118	1	Mammal	medium	RIB	mid	ND	ND	R	.	.	.
119	2	Mammal	md/large	VRT	fr	ND	ND	A	.	.	2
120	1	Mammal	md/large	LBN	sh	ND	ND	U	3	.	.
121	1	Mammal	md/large	LBN	sh	ND	ND	U	2	.	.
122	5	Mammal	md/large	LBN	sh	ND	ND	U	1	.	2
123	1	Mammal	md/large	LBN	sh	ND	ND	U	.	.	.
124	2	Mammal	md/large	DEN	fr	ND	ND	U	1	.	.
125	1	Mammal	md/large	RIB	mid	ND	ND	U	2	.	.
126	1	Mammal	md/large	FEM	sh	ND	ND	U	2	.	.
127	3	Mammal	md/large	RIB	mid	ND	ND	U	1	.	.
128	4	Mammal	md/large	RIB	mid	ND	ND	U	.	.	1
129	1	Mammal	large	VRT	fr	ND	ND	A	3	.	1
130	6	Mammal	large	VRT	fr	ND	ND	A	.	.	2
131	3	Mammal	large	LBN	sh	ND	ND	U	.	.	3
132	5	Mammal	large	LBN	sh	ND	ND	U	.	.	4
133	1	Mammal	large	LBN	sh	ND	ND	U	.	.	1
134	1	Bird	Gallus gallus	HUM	sh	ND	ND	L	.	.	.
135	1	Bird	Gallus gallus	FEM	dsh	ND	F	R	.	.	.
136	1	Bird	Gallus gallus	FEM	psh	F	ND	L	.	.	.
137	2	Bird	Gallus gallus	RAD	co	F	F	R	.	.	.
138	1	Bird	Gallus gallus	ULN	sh	ND	ND	L	.	.	.
139	2	Bird	Gallus gallus	TBT	sh	ND	ND	L	.	.	.
140	1	Bird	Gallus gallus	TBT	sh	ND	ND	R	.	.	.
141	1	Mammal	Felis domesticus	TIB	dsh	ND	F	R	2	.	.
142	1	Bird	unid	RAD	sh	ND	ND	U	.	.	.
143	2	Mammal	unid	NID	fr	ND	ND	U	2	.	.
144	21	UNID	unid	NID	fr	ND	ND	U	.	.	.
145	1	Bird	unid	LBN	sh	ND	ND	U	.	.	.
146	86	Mammal	unid	NID	fr	ND	ND	U	.	.	6
147	1	Fish	unid	VRT	fr	ND	ND	A	.	.	.



APPENDIX  
VIAPPENDIX  
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IV

## V

R	CT	CH	SH	SW	RD	CN	Comments
9	11	.	.	.	.	1	
100	1	.	.	.	.	.	
101	.	.	.	2	.	.	1/2 in steak
102	.	.	.	1	.	1	
103	.	.	2	.	.	1	
104	.	.	1	.	1	.	
105	.	.	1	.	.	.	
106	.	.	.	.	.	1	
107	.	.	1	.	.	.	green discolor
108	1	.	.	3	.	2	2 rust stained
109	2	.	1	2	.	.	
110	.	.	.	.	.	.	
111	.	.	1	.	.	.	
112	.	.	.	.	.	.	
113	3	.	.	2	.	.	
114	.	.	.	.	.	1	
115	.	.	.	.	.	.	
116	.	.	.	.	.	1	
117	.	.	.	.	.	.	
118	.	.	.	.	.	.	
119	.	.	1	2	.	.	
120	.	.	.	.	.	.	
121	.	.	.	.	.	.	
122	1	.	.	1	.	3	
123	.	.	.	.	.	.	
124	.	.	.	.	.	.	
125	.	.	.	.	.	.	
126	.	.	.	.	.	1	
127	.	.	.	.	.	.	
128	.	2	.	.	.	.	
129	.	.	.	1	.	.	
130	.	.	1	1	.	1	
131	.	.	.	6	.	.	1in, 3/4in, 1/2in
132	.	.	.	4	.	.	1 rust stained
133	.	.	.	1	.	.	
134	.	.	.	.	.	.	
135	.	.	.	.	.	.	medullary
136	.	.	.	.	.	.	
137	.	.	.	.	.	.	
138	.	.	.	.	.	1	
139	.	.	.	.	.	1	
140	.	.	.	.	.	.	
141	.	.	.	.	.	.	
142	.	.	.	.	.	.	
143	.	.	.	.	.	.	
144	.	.	.	.	.	.	
145	.	.	.	.	.	.	
146	.	.	.	8	.	.	1 rust stained
147	.	.	.	.	.	.	

R	QNTY	CLASS	Taxon	BP	POR	PxF	DsF	SYM	WEA	BN	#BT
148	7	Mammal	unid	NID	fr	ND	ND	U	1	.	1
149	2	Bird	unid	TMT	sh	ND	ND	U	.	.	.
150	19	Bird	unid	LBN	sh	ND	ND	U	.	.	.
151	1	Bird	unid	PEL	fr	ND	ND	U	.	.	.
152	2	Bird	unid	PHAP	fr	ND	ND	U	.	.	.
153	2	Bird	unid	NID	fr	ND	ND	U	.	.	.
154	4	Bird	Meleagris gallopavo	TMT	fr	ND	ND	L	.	.	.
155	1	Bird	Meleagris gallopavo	ACE	fr	ND	ND	L	.	.	.
156	2	Bird	Meleagris gallopavo	TMT	fr	ND	ND	R	.	.	.
157	1	Bird	Meleagris gallopavo	TBT	dse	ND	ND	R	.	.	.
158	1	Bird	Meleagris gallopavo	TBT	sh	ND	ND	L	.	.	.
159	1	Bird	Meleagris gallopavo	TBT	px	F	ND	L	.	.	.
160	1	Bird	Meleagris gallopavo	FEM	px	F	ND	L	.	.	.
161	1	Mammal	Sylvilagus sp.	FEM	pse	ND	ND	R	.	.	1
162	1	Mammal	Rattus sp.	TTH	co	ND	ND	L	.	.	.
163	1	Mammal	Rodentia	FEM	sh	U	ND	L	.	.	.
164	1	Mammal	Rodentia	TIB	sh	ND	ND	L	.	.	.
165	1	Mammal	O. aries	MT	cp	F	U	L	2	.	.
166	1	Mammal	O. aries	RAD	sh	ND	ND	L	.	.	.
167	1	Mammal	O. aries	HUM	dsh	ND	F	L	.	.	1
168	1	Mammal	O. aries	HUM	dsh	ND	F	R	.	.	1
169	1	Mammal	sm/medium	LBN	sh	ND	ND	U	.	.	.
170	1	Mammal	sm/medium	LBN	sh	ND	ND	U	1	.	.

R	CT	CH	SH	SW	RD	CN	Comments
148	•	•	•	2	•	•	1 rust stained
149	•	•	•	•	•	•	1 green discolor
150	•	•	•	•	•	•	4 medullary
151	•	•	•	•	•	•	
152	•	•	•	•	•	1	
153	•	•	•	•	•	•	
154	•	•	•	•	•	3	
155	•	•	•	•	•	•	
156	•	•	•	•	•	1	1 rust stained
157	•	•	•	•	•	•	
158	•	•	•	•	•	•	
159	•	•	•	•	•	•	
160	•	•	•	•	•	•	
161	2	•	•	•	•	•	clear bt
162	•	•	•	•	•	•	LI
163	•	•	•	•	•	•	
164	•	•	•	•	•	•	
165	•	•	•	•	•	•	
166	•	•	•	•	•	1	
167	3	•	•	•	•	1	
168	2	•	•	•	•	1	
169	•	•	•	•	•	•	
170	•	•	•	•	•	•	

IV

VII

IV

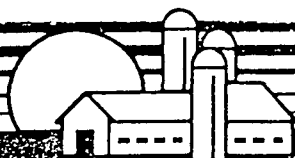
**APPENDIX IV**

**SOIL CHEMICAL, OYSTER SHELL,  
AND BOTANICAL ANALYSES**

**DESCRIPTION OF PROVENIENCES FOR SOIL CHEMICAL SAMPLES**  
**Gott's Court Site -18AP52**

The following list itemizes the 25 soil samples by SS#:

<u>SS#</u>	<u>PROVENIENCE</u>
1	Trench 11 & 11A: EU2 - F1103, L6: 112-122 cmbs
2	" " " " " " , L7: 122-132 cmbs
3	" " " " " " , L8: 132-137 cmbs
4	" " " " " " , L9: 102-137 cmbs
8	Trench 13 & 13A: EU9 - F1305, 93-109 cmbs
11	" " " " EU24 - F1311, 102-113 cmbs
13	Trench 8: F0801, (Bag 1) Level XI
14	" " (Bag 2) Level IV
15	" " (Bag 3) Level VI
16	" " (Bag 4) Level VIII
17	" " (Bag 5) Level IX
18	" " (Bag 6) Level XI
19	" " (Bag 7) Level X
20	" " (Bag 8) Level XII
21	" " (Bag 9) Level XIII
22	" " (Bag 10) Level XIV
36	" " (Bag 11) Level IX
37	" " (Bag 12) Metal liner
38	" " (Bag 13) Level XIV
39	" " (Bag 14) Exterior to feature
40	" " (Bag 15) " " "
41	" " (Bag 16) " " "
42	" " (Bag 17) " " "
43	" " (Bag 18) " " "



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## MINERALS IN SOILS

Sample Name	CA 422.673	P 178.287	K 766.341
1	6393.462	3033.654	4511.346
2	12381.923	6374.231	5033.654
3	17944.600	9910.600	4052.800
4	4980.577	3835.385	5351.154
8	12117.037	1116.111	4216.111
11	23226.296	1080.741	4521.852
13	2596.800	1141.800	10720.200
14	2051.346	708.462	9678.077
15	2822.115	1220.192	3727.885
16	2560.400	977.400	7216.000
17	2201.071	1123.214	10532.143
18	2815.370	845.556	10902.593
19	2163.448	890.000	9723.621
20	2617.600	722.200	11178.200
21	2684.821	1288.036	11692.321
22	2475.893	688.214	9595.536
36	2641.400	956.000	9676.400
37	4635.577	3420.192	7819.231
38	2096.154	826.923	11337.308
39	2178.519	616.852	10818.704
40	2263.400	523.800	11955.800
41	2587.857	853.571	11155.000
42	2476.481	580.926	11587.963
43	2703.800	456.600	12728.000

## OYSTER SHELL ANALYSIS

Analysis of oyster shell from the Gotts Court Site was conducted in an attempt to establish information regarding the importance of oyster harvesting and use in historic Annapolis. Analysis of oyster features and morphology can help to determine: 1) The habitat from which oysters were being harvested. 2) The seasons during which oysters were being harvested. 3) Changes in procurement strategies and importance of oysters in diet over time 4) Importance of oysters in the diet 5) Butchering practices.

Oysters recovered from archaeological context are young fossils, and as such are subject to the destructive processes of physical and chemical alteration. The Gotts oysters were recovered in a poor state of preservation, with excavation, handling and cleaning the specimens compounding their eroded condition. Much of the analysis of oyster shell for cultural and environmental indications relies upon the observation of minute features of the intact valve. The condition of the Gotts sample severely limited the extent of analysis possible.

Oyster shell composed a substantial portion of the artifact assemblage recovered from Gotts Court. A sample of intact valves\* was retained from midden levels, and all intact shell was retained from feature context. One hundred fifty three American oyster valves (Crassostrea virginica) were analyzed from 42 field samples, seven clam valves (Mercenaria mercenaria) (2 intact) and

\* Intact valve are those valves where the hinge is present, and where both a height and length measurement can be observed.

two mussel shell (Ischadium recurvum) fragments were also identified from these same samples. Intact oyster valves were recovered by hand during field excavation; broken valves and shell fragments were discarded. Retained oyster shell was returned to the lab to be washed and curated. A subsample of site total oyster shell was taken: Oyster shell from three features; the 18th Century cellar (Features 1103 and 1105) (32% of the analyzed sample), the 18th Century kitchen (Trench 13) (21% of the sample), the 19th Century Well (Feature 0801) (42% of the sample), and the Gotts Midden (5% of the sample) was isolated for analysis. Analysis of oyster shell was performed on intact valves only.

The American Oyster occupies a variety of habitats, surviving in environments which differ greatly in water salinity, depth and turbidity. Within the Chesapeake Bay and its tributaries oysters live subtidally, mostly in water depths ranging from 8 to 25 feet (Lippson and Lippson 1984). Analysis of oyster size, shape, and growth habit combined with the study of organisms which live upon the oyster shell (epibionts), can help to elucidate the habitat from which an oyster was harvested.

For the Gotts site sample, morphometric analysis was used to determine differences in shell shape. The height to length ratio (HLR) (Gunter 1938) was the method employed to determine the environment in which the oyster grew. Measurement of the height of a given valve (the maximum dorsal-ventral dimension) divided by its length (the maximum anterior-posterior dimension) yields a value which varies from 1.0 to 4.0. The height to length ratio is determined by the habitat in which the oyster lived (Kent 1988). Gotts Court oysters were divided into three growth categories:

Sand Oysters: short, broad oysters with an HLR if less than 1.3.



Bed Oysters: intermediate oysters with HLR ranging from 1.3 to 2.0.

Channel Oysters: large, elongated oysters with an HLR greater than 2.0

Bed oysters were the most common oyster type encountered, composing 86 percent of the analyzed sample (N=153). Channel oysters comprised 12% of the sample, and 2% of the sample were sand oysters. Table 02 presents the percentage of total oyster types for each of the four features sampled.

A systematic survey was made of the organisms attached to the oysters recovered from Gotts Court. Such marine organisms have specific salinity ranges, and, by identifying the epibionts on archeological oysters and comparing this with epibionts communities on living oysters from various salinities, we may determine the salinity of the waters from which archaeologically recovered oysters were harvested. Barnacles and evidence of encrusting ectoprocts were absent from the valves analyzed, probably due to the eroded condition of the Gotts Court sample. Shell damage caused by boring sponges was common throughout the site assemblage. Sponges of the genus Cliona are one of the most persistent pests to oysters, riddling their shell with holes. Hopkins (1962) has identified two distinct groups of Cliona species 1) Cliona trutti, C. vastifera and C. lobata which are common in brackish water and have small boreholes (incurrent 0.2 mm to 0.5 mm, excurrent 0.6 mm to 1.6 mm) and 2) Cliona celata which create large boreholes (incurrent 0.8 mm to 2.5 mm, excurrent 2.0 mm to 4.5 mm). Observation of the boreholes left by these boring sponges can be used as salinity indicators (Hopkins 1962). Cliona sponges cannot tolerate salinity consistently below 10 parts per thousand (ppt), and will not grow on intertidal oysters; the absence of Cliona boreholes indicates that the host oyster grew in an area of low salinity (Lippson and Lippson 1984, Hopkins 1962). Oyster shells exhibiting boreholes caused by C. trutti type sponges would have been harvested from

waters ranging in salinity from 10 ppt to 20 ppt. C. celata sponges enjoy waters of higher salinity, from 15 to above 20 ppt.

Today, the waters of the Chesapeake Bay in the vicinity of Annapolis harbor are slightly brackish to moderately salty, with average maximum salinities of about 18 ppt during the summer season in the Bay proper, and with wintertime minimum salinities as low as 6 ppt in the Severn River and its tributaries. Based on epibiont analysis, the Gotts Court oysters were harvested from a variety of waters. Sixty three percent of the analyzed valves (N=153) had an absence of boreholes, which represent oysters which would have been harvested from intertidal flats or the fresher waters of the Severn River; 21 percent of the valves exhibited boreholes of C. trutti type sponges, suggesting that the oysters were harvested from marginally salty waters; 16 percent of the sample showed a predominance of large C. celata boreholes, indicating that the oysters came from saltier open Bay waters.

The Gotts Court oyster sample was examined for evidence of butchering; the eroded condition of the valves prohibited the confident identification of any such marks.

Seasonality of oyster harvesting is determined through the analysis of shell microgrowth patterns on intact valves. The growth lines in bivalves can provide information regarding both the age of the individual organism harvested, and the time of the year during which harvesting occurred. Unfortunately, the poor preservational condition of the Gotts Court sample made such analysis impossible without advanced microscopic equipment.

Oysters would have provide the Gotts Court residents with an ample food resource throughout all seasons. The location of the site would have been in close proximity to a variety of aquatic ecosystems from which a diverse array of oyster types could be harvested, using a variety of technologies; from hand harvesting the single shellfish on tidal mudflats, to tonging

for oysters in waters of the Severn River and the Chesapeake Bay, to the large scale harvesting of bed and channel oysters with dredge boats since the mid-19th century.

Oyster shell was equally abundant throughout the three cultural features from which oyster shell was analyzed; the 18th century cellar and associated kitchen, and the 19th Century well. Intact valves and shell debris were concentrated in activity areas within these features. The early 20th Century Gotts Midden which was sampled yielded very few oyster remains, and these were scattered throughout the cultural area in no apparent pattern. Oyster remains from the 18th and 19th Century contexts were homogenous in composition; with oyster types (i.e, Bar, Sand and Channel) and salinity assignments rather evenly mixed throughout the three features. Floral and faunal analysis was performed on samples from these same features. The overall dietary assemblage from the site is diverse; utilizing a variety of wild and domestic plant and animal resources throughout all cultural occupations at the site. Considering the rich estuarine environment local to Gotts, the American Oyster would have provided an important and consistent dietary component throughout centuries of site occupation.

**SAMPLE FROM GOTTS COURT DEPOSITIONS**

FS	PROVENIENCE	FRAGMENTS # (WT)		WHOLE SHELLS # (WT)		TOTAL WT
252	EU19 TR18 F1801 58-106 CMBS	4	18.57	1	17.05	35.62
2	TR02 L2 22-44 CMBS	0	0	0	0	0
9	TR4 L2 31-55 CMBS	2	26.40	1	38.22	64.62
16	TR7 L2 22-32 CMBS	1	2.12	0	0	2.12
17	TR8 L2 28-46 CMBS	1	28.95	2	69.11	98.06
18	TR08 L3 46-72 CMBS	7	42.40	2	91.10	133.50
36	TR11A L2 54-97 CMBS	1	32.64	0	0	32.64
40	TR 11 F1103 110CMBS	1	8.68	0	0	8.68
47	TR09 L2 28-35 CMBS	0	0	1	67.71	67.71
82	EU2 TR11 L5 102-112 CMBS	1	5.64	1	55.99	61.63
154	EU9 L4:87-97 CMBS	0	0	1	41.05	41.05
256	EU24 TR 13A L4:92-102 CMBS	6	36.23	7	363.10	399.33
262	EU24 TR 13A L5 102-113 CMBS	22	262.48	15	799.76	1062.24

FEATURE 1103 - CELLAR						
FS	PROVENIENCE	FRAGMENTS # (WT)		WHOLE SHELLS # (WT)		TOTAL WT
81	EU2 F1103 L5 102-112 CMBS	4	10.49	6	164.88	175.37
84	EU2 F1103 L6 112-122 CMBS	1	3.17	0	0	3.17
85	EU2 F1103 INT L5 102-112 CMBS	2	17.20	9	272.21	289.41
96	EU2 F1103 INT TR 11-11A L6 112-122	2	16.24	7	112.64	128.88
97	EU2 TR 11-11A F1103 INT L7:122-132	2	15.25	11	266.99	282.24
98	EU2 F1103 INT L-8 132-137	1	1.73	0	0	1.73
101	EU2 F1103 L9 102-137 TR11/11A 102-137	2	17.79	2	53.0	70.79
123	EU6 F1103 L4 94-105 CMBS	0	0	3	189.29	189.29
124	EU6 F1103 L5 105-115 CMBS	3	3.86	3	73.34	77.20
125	EU6 F1103 L6 115-125 CMBS	0	0	2	33.01	33.01
136	EU6 F1103 L7 125-135 CMBS	0	0	1	72.86	72.86
158	EU6 F1103A- L11 105-115 CMBS	0	0	1	25.73	25.73
234	EU23 TR 11 F1103 82-102 CMBS	0	0	1	17.55	17.55
235	EU23 TR11 & 11A F1103A 105-137CMBS	1	2.44	1	23.49	25.93
236	EU23 TR11 F1103 102-129 CMBS	4	23.64	1	22.36	46.0
152	EU9 F1305 93-109 CMBS	1	13.15	1	40.81	53.96
272	EU24 F1311 TR13A 102-113 CMBS	15	237.63	8	445.9	683.53

## OYSTER SHELL GOTTS COURT 18AP50

FEATURE 0801 - WELL						
FS	PROVENIENCE	FRAGMENTS # (WT)		WHOLE SHELLS # (WT)		TOTAL WT
106	EU5 F 0801 L1:72-82 CMBS	7	60.80	17	635.0	635.8
107	EU5 F0801A 82-102CMBS	0	0	4	70.46	70.46
116	EU7 F0801 70-80 CMBS	1	26.44	3	119.65	146.09
129	EU5 F0801C 82-100 CMBS	0	0	1	18.13	18.13
130	EU5 F0801C 100-135 CMBS	1	2.00	2	54.98	56.98
132	EU7 F0801C 100-135 CMBS	0	0	1	36.43	36.43
191	EU5 F0801B 82-102 CMBS	4	11.58	17	1276.05	1287.63
212	EU7 F0801B 82-102 CMBS	1	4.6	13	1052.04	1056.64
215	EU7 F08010 102-122 CMBS	0	0	2	108.11	108.11
266	EU5 F0801D 102-122 CMBS	1	39.97	4	138.08	178.05
291	F0801B 166-196 CMBS	1	2.34	0	0	2.34
296	F0801B 196-236 CMBS	0	0	1	75.02	75.02

VI

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## PLANT REMAINS FROM THE GOTTS COURT SITE 18AP52

The following report describes the botanical remains recovered during phase II excavations at the Gotts Court Site (18AP52) in Historic Annapolis.

### SAMPLING AND FLOTATION PROCEDURES

During excavation, samples of known volume (usually 1 liter) were taken for flotation from each natural strata of feature fill excavated. Flotation samples were water floted using a modified system of tub flotation (Struever, 1968) using # mesh screen, resulting in a heavy and a light fraction. Charcoal from these two fractions was combined for further analysis.

### METHODS

The material resulting from flotation was passed through a 2mm screen, yielding two size fractions for analysis. The >2mm size fraction was weighed, examined under low magnification (10X - 30X) and sorted into general categories (i.e. wood, seed, etc.). Fragments of each category were counted, and weight (in grams) of each recorded. The <2mm size fraction was weighed and scanned carefully under low magnification. All seeds, seed fragments and remains of cultivated plants were removed for further examination. Carbonized plant material from the two size fractions was combined for identification.

An attempt was made to identify all seed and cultivated plant remains. From flotation samples containing large amounts of wood charcoal, a sub-sample was taken: Identifications were attempted on the first 20 randomly selected wood fragments from each sample.

Identification for all classes of plant material were made to the Genus level in most cases and to the Species level only when 1) only a single species exists in the region (i.e. Castanea dentata) or 2) all other species can be eliminated on the basis of morphology (i.e. Ilex opaca). Identifications were made with the aide of standard texts (Brown and Brown 1972, Martin and Barkley 1961, Panshin and de Zueew 1970) and ultimately, by comparison to specimens from a modern reference collection.

### RESULTS OF ANALYSIS



The excavations at Gotts Court from which flotation samples were selected represent features of various morphological categories associated with domestic rear yard and commercial back lot contexts spanning over two centuries.

The 18 liters of fill analyzed from six features at the Gotts Court Site yielded 2.19 grams of charcoal, or an average density of 0.12 grams of charcoal per 1 liter of fill. Table 01 presents, for each feature analyzed, the total flotation volume, total weight of sample charcoal and the counts of each of the specific taxa identified.

#### WOOD REMAINS

Wood charcoal was the most abundant class of plant remain recovered from the Gotts Court Site, composing 79% of the botanical assemblage. Wood charcoal was encountered in all six of the features analyzed, with at least five taxa being represented.

The overall site assemblage showed a predominance of pine (Pinus sp.) and red oak (Quercus sp.) species. Hickory (Carya sp.) was present in two of the features analyzed, and maple (Acer sp.), american chestnut (Castanea dentata) and a coniferous species were present in small quantities. Wood fragments in a poor state of preservation were assigned to the categories 'ring porous', 'diffuse porous' or simply 'unidentifiable'. This was the case with 41% of the identified fragments. Table 02 presents the percentage composition of wood taxa identified.

#### SEED REMAINS

A total of 41 seeds were recovered (mean = 2.27 seeds per liter of fill). Taxa represented included: Amaranthaceae (pigweed family) 34.1%, Euphorbia sp. (spurge) 12.2 %, Chenopodium sp. (goosefoot) 26.8%, Portulaca sp. (purslane) 2.4%, Solanaceae (nightshade family) 7.3% and an unknown seed type ('unknown seed type #1') 9.8%. Over seven percent of the recovered seeds were labeled 'unidentifiable' due to their poor state of preservation.\* Complete seed counts for each feature are presented in Table 01.

All seeds identified from the Gotts Court assemblage represent plants which would have been common in the Chesapeake Bay area throughout the 18th and 19th centuries. Invasive weedy annuals such as pigweed (Amaranthaceae), spurge (Euphorbia sp.) and goosefoot (Chenopodium sp.) would have been species common to the semi-urban and urban landscape of Annapolis throughout this period.

\*Percentage based on total seeds recovered N=41.

The low frequency with which the seeds were encountered at Gotts Court indicates that these species were probably incidental inclusions in the features excavated.

#### OTHER VEGETATIVE REMAINS

Seven fragments representing Zea Mays (corn) were recovered from two features (EU6, an 18th Century posthole, and F1103, an 18th Century cellar). In addition, 42 fragments of 'Amorphous Charcoal' were recovered from the site assemblage. These fragments possess no diagnostic morphology on which to base a more detailed identification.

#### FLORAL SUMMARY

The vegetative samples from the 18th and 19th Century features excavated at the Gotts Court Site reflects the urban nature of Annapolitan lifeways during this period. The rather small overall botanical assemblage and limited variation (both in quantity and composition) between samples analyzed restricts interpretation of the form and function of the excavated features based on floral analysis.

Food-plant remains recovered from Gotts Court were negligible, which may reflect the use of these urban rear lots not as gardens or food processing or storage areas. The clear absence of nutshell, fruit pits and abundant kitchen debris points to the role of the structures and area surrounding the excavated features as dependencies, either domestic or commercial, rather than primary household depositions. The lack of starchy grains (i.e wheat) and limited maize remains from the site is also suprising (Hendrick 1972, Leighton 1976) considering the dependency that Marylanders would have had on such starchy staples during this time.

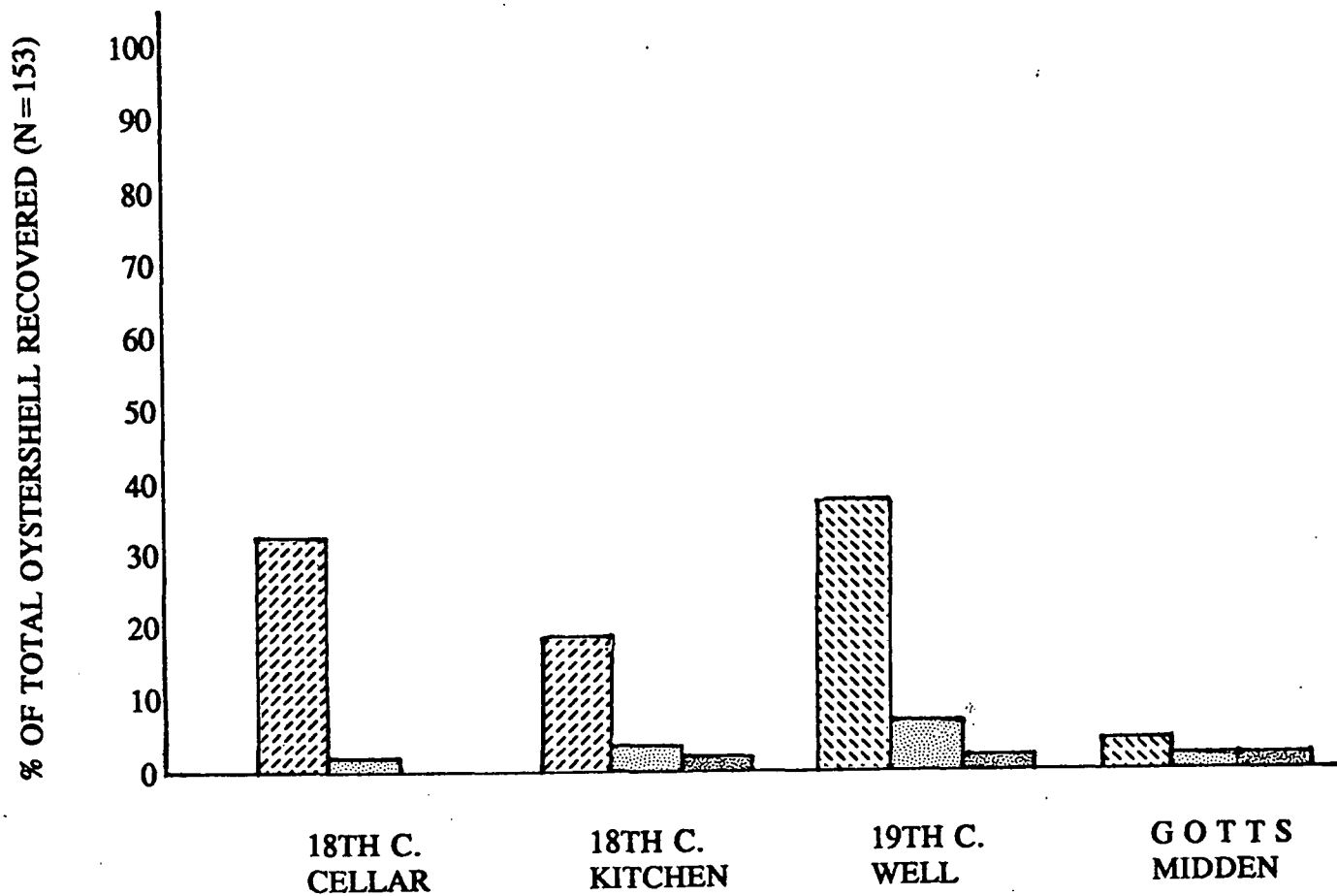
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TABLE 02 PERCENTAGE COMPOSITION OF FLOTATION  
RECOVERED WOOD CHARCOAL FROM THE GOTTS COURT SITE 18AP52


<u>TAXON</u>	<u>% OF IDENTIFIABLE</u>	
<u>FRAGMENTS*</u>		
<u>Acer</u> sp. (Maple)	1.5%	
<u>Carya</u> sp. (Hickory)		6.7%
<u>Castanea dentata</u> (American Chestnut)	.7%	
<u>Pinus</u> sp. (Pine)	25.9%	
<u>Quercus</u> sp. (Red Oak)	23%	
CONIFEROUS SPECIES	.7%	
RING POROUS		14.1%
DIFFUSE POROUS	.7%	
UNIDENTIFIABLE	26.7%	

\*A total of 343 wood charcoal fragments were recovered



% OF TOTAL OYSTER TYPES BY CULTURAL FEATURE

BED OYSTER 

CHANNEL OYSTER 

SAND OYSTER 

TABLE 02.

**APPENDIX V**  
**TIN GLAZED WARES**

# RESEARCH DESIGN FOR COMPOSITIONAL STUDY OF TIN GLAZED TABLEWARES FROM THE GOTT'S COURT PROJECT

J. Emlen Myers

## INTRODUCTION

This appendix describes the beginning of a long-term compositional study of the typology and production sources of tin glazed table wares found in Eighteenth century archaeological deposits in Maryland. Described here are research questions related to the production and distribution of these ceramic artifacts, and the appropriateness of compositional analysis for addressing these questions. Samples of the paste from twenty-four of the tin glazed ceramics have been taken in the course of the Gott's Court project and will be retained for laboratory study by neutron activation analysis (NAA) to be carried out at a later date at the University of Missouri's Research Reactor in Columbia. A listing of the artifacts sampled are given in Table 1. The sampling procedures and laboratory methods are also described. Finally, the plan of work for the long term project is outlined.

## BACKGROUND

The tin glazed earthenware assemblage of Gott's Court reflects the history and economy of the emerging nation states of Northern Europe (Caiger-Smith 1973). Their pattern of distribution was strongly influenced by mercantilist economic policies (Wilcoxon 1987:13) and their technology was a product of competitive commercial relationships within Europe. The decorative attributes of these ceramics were influenced by contacts outside of Europe, especially in the Orient, that had been broadening throughout the post-Medieval period (McNiell 1963). Tin glazed pottery was primarily a tableware. As such it was part of the foodways and domestic style of the growing commercial classes that used it both in Europe and in European communities in the Americas (Quimby 1972; Deetz 1977).

Tin glazed pottery, depending on the country of origin, is also referred to as Delft, faience, or majolica. Technically it is a low-fired, usually high calcium, earthenware covered with a tin-opacified lead glazed (Hamer 1975). The technology originated in early Medieval times in the Middle East (Caiger-Smith 1973). The tin glaze creates an opaque white surface on which glaze-painted designs are highlighted. Blue painted tin-glazed wares gave the effect of Oriental porcelain and, in the American Colonies as elsewhere were often used as a substitute for that relatively expensive import. There was a long and complicated history of imitation and influence among European and Oriental ceramic styles, so that by the eighteenth century European and Latin American industries that imitated specific Chinese porcelain designs in tin glaze ware, while certain Chinese industries had developed styles specifically tailored to European tastes (Wilcoxon 1987:87). Prohibitive cost of Oriental imports encouraged imitation but so did mercantilist trade restrictions within the Atlantic trade zone. As a consequence numerous Dutch, English, Italian, Spanish, French, Portuguese, Mexican and other South American centers were producing table wares in the tin glaze tradition by the Eighteenth century (Caiger-Smith 1973).

TABLE 1. SAMPLE ID LIST FOR GOTT'S COURT TIN GLAZE CERAMICS (N=24)

ID GTC+	FS+	Glaze	Form	Comment
001	285	Polychrome	-	Manganese Paint
002	119	Blue and White	Hollow	Reserve Design
003	119	Blue and White	Hollow	-
004	027	Blue and White	-	Base, Floral Motif
005	040	Polychrome	Hollow	Rim, Thick, Blue & Orange
006	114	Polychrome	Plate	Zackerly, Liverpool, 1750-1770
007	127	Polychrome	Hollow	Yellow Black, Green & Red
008	128	Polychrome	Plate	Red & Blue
009	170	Blue and White	Bowl	Footed Bowl, Reconstruction
010	236	Polychrome	Hollow	Red & Blue
011	155	Blue and White	-	Wheat Motif
012	256	Without Glaze	Jar	Outcurving Rim
013	262	Plain White Delft	-	Base
014	262	Plain White Delft	-	Small Fragment
015	272	Blue and White	Hollow	Rim, Chain Motif
016	272	Blue and White	Flat	-
017	272	Blue and White	Flat	-
018	272	Blue and White	Flat	-
019	272	Blue and White	Flat	-
020	042	Blue and White	Plate	-
021	113	Polychrome	Plate	Red & Blue
022	073	Blue and White	Flat	Chain Motif
023	279	Blue and White	Base	Floral Pattern
024	262	Blain White Delft	-	Small Fragment



## RESEARCH QUESTIONS

Tin glazed tablewares at Eighteenth century sites are relevant to questions addressed by historical archeology in the Mid-Atlantic region of the Eastern United States. In Maryland this is particularly true for sites along the Eastern and Western shores of the Chesapeake Bay. These artifacts are probably indicative of middle to upper socio-economic status on the part of the households that used them, and of the commercial activity of the communities that possessed them in larger quantities.

The issue of household social status and tin glaze table wares has not been substantially addressed at sites in Maryland. This may be due the relative scarcity of these wares among documented archaeological collections. By contrast, studies of Spanish tradition majolica have focused on social status for Spanish Colonial sites in the Southeastern U.S. and Caribbean (Deagan 1983), as have studies of industrially produced English-tradition table wares that predominate in later collections in Maryland and elsewhere, with the former English colonies and elsewhere (Miller 1980); and to the north of Maryland price differences and implied status differences have been noted for elft and Italian majolica found at earlier Dutch colonial sites (Baart 1987:1-11). The tin glaze assemblage from Gott's Court, totalling some 650 sherds, indicates that the present lack of data is not due to a lack in the archeological record itself. Rather, it is likely that continued data recovery projects in the area, as well as other ongoing collection-based projects will add to the corpus of well-studied tin glazed wares.

The potential for addressing issues of social status and economic scaling using tin glaze ceramics is substantial. The great distances of the potential production sources (Hurst et al. 1986; Goggin 1968; Lister and Lister 1982)), all of them outside of the Mid-Atlantic Region, is one factor affecting cost. The recognized variation of quality of the wares (Caiger-Smith 1973) is another.

Because these wares were are all imported from a considerable distance by sea, they are also direct evidence of organized commercial activity in Eighteenth century Maryland. Identification of these artifact's precise production sources would provide a valuable and frequently unique information on Eighteenth century commercial contact in the region. Where trade is concerned, neither historical documentation nor archeological analysis alone tell the complete story. History provides the overall social context in which trade can be understood and reveals details of specific instances of commerce. Archeological data can complement the written records by providing evidence of poorly documented illicit trade and by quantifying the volume of commercial activity where the records are fragmentary (Skowronek 1990). Where highly restricted mercantilist trade is concerned there is good reason to believe that unsanctioned commercial contacts may be vastly underrepresented in documentary evidence. This is because primary records of such trade, i.e. records kept by those involved directly in the trade, constituted incriminating evidence. These factors make archaeological data on trade indispensable for developing an accurate picture of the sources and volume of trade, whether from ceramics or other artifact classes.

If archaeological tin glaze table wares are to be used to address the above issues of household social status and seaborne commerce then it is important to establish as specifically as possible the production sources of the ceramics involved. The ceramic coding system used for this report reflects the current state of knowledge regarding tin glazed table ware sources as reflected in visual attributes of the ceramics. Researchers are well aware of the variety of potential sources of these ceramics, yet there is not a well-developed set of visual criteria to use in attributing archeological examples to their sources. Part of the problem is that the best documentation for tin glaze types is for the finest and most elaborately decorated examples rather than the more modes vernacular wares that predominate in assemblages such the one from Gott's Court (see Noel Hume 1974). Another aspect of the problem is that archeological examples are often small and lack complete decorative motifs. Without reconstructed pieces or museum examples of comparable

complete pieces of known source, the identification of source from visual attributes alone remains imprecise.

## METHOD

The objective of this project is to use compositional data both from unknown samples and source data, to verify suspected sources and to determine unknown sources of the tin glaze ceramic types in question. From the research on specific samples, it is expected that visual criteria for source identification can be developed.

Our project will employ neutron activation analysis (NAA), the preferred method of chemical analysis for provenance and resource studies of archaeological ceramics. The method provides precise, simultaneous determination of the bulk concentrations of up to 35 major, minor and trace elements and requires minimal sample preparation (Perlman and Asaro 1969; Harbottle 1975, 1990; Glascock 1989; Hughes et al. 1991). Samples of only about 100 mg of the ceramic body are needed and these can be taken from the artifacts in a minimally destructive way. The principle of NAA is that a stable atomic nucleus, when irradiated by neutrons, undergoes a nuclear transformation to produce a radioactive nuclide. Certain radionuclides decay with the emission of gamma rays of characteristic energy providing a basis for their identification in an irradiated sample. Determination of the intensities of these gamma ray emissions allows one to quantify the concentrations of the corresponding elements in the original sample.

With laboratory analysis complete, the first step in the interpretation of chemical data begins with simple inspection of the elemental concentration data. Then, statistical and numerical techniques can be used to identify multiple and often hierarchical groupings of samples based on the data (Bishop and Neff 1989). Previous research on Spanish tradition tin glazed wares has shown, for example, that it is possible to partition groups of archaeological samples from New World Spanish sites into Spanish and Mexican production (Olin et al. 1978) and that such groups can in turn be subdivided: Spanish production into sub-groups attributable to Seville, Talavera, and Manises (Jornet et al. 1985b; Myers et al. 1992), and Mexican into sub-groups attributable to Puebla and Mexico City (Olin and Blackman 1989). Of particular interest for our study, Jornet et al. have also shown that majolica from the adjacent Valencian production centers of Paterna and Manises can be distinguished by their chemical composition (1985a:246-247).

In general, the assignment of groups to specific production sources is based on their compositional similarity to samples whose origin is known. This type of inference is based on the widely held assumption known as the "provenience postulate" which says that systematic differences between ceramic compositions correspond to differences in the characteristic local clays and techniques used by the potters (Harbottle 1982). For Delft wares, such as those identified in the Gott's court assemblage, there were often well-developed and precise recipes for the preparation of potting clays (Caiger-Smith 1973:130). This may well have caused compositional patterns that are characteristic of particular recipes rather than of naturally-occurring clay resources. The planned research will shed light on this methodologically interesting question.

Samples of the ceramic paste were taken from twenty five selected sherds using a tungsten carbide drill bit and burr mounted in a pin vise and in a hand-held rechargeable drill equipped with an adjustable chuck. Because of the soft and friable nature of tin-glaze pottery, the use of a high-speed electric drill was not required. Clean procedures were employed to insure the purity of the samples. These included the cleaning of drills and burrs between samples with solvent and paper wipes, the collecting of samples on glazine weighing paper, and the storing of the resulting ceramic powder in air-tight glass sample vials. Approximately 200mg of sample were taken from broken edges of the sherds. Surfaces were scraped clean with the burr prior to the actual sampling and

steps were taken to avoid contamination of the sample by loose flakes of glaze, or by glaze materials that may have seeped into the ceramic body in a fluid state during firing.

## GOTT'S COURT TIN GLAZED WARES

For domestic table wares of the European tradition, the eighteenth century was a watershed. There was a wide range of production sources in operation, including slip-painted wares, traditional salt glazed stoneware, and tin glazed. The rise of industrially-produced English white wares had begun. This was an industry and a technology that was soon to dominate the market and eliminate or greatly reduce the production volume of the older, smaller-scale producers. The Gott's court tin glaze assemblage falls within this transition period, and thus represents a time when tin-glaze export industries were waning.

As reported in the ceramics section of the body of this report, the majority of the tin glaze wares in the assemblage are thought to be Delftware of English origin. Many of the pieces are small and nondescript, however, and it must be said that this identification often rests on the knowledge that for most of the Eighteenth century the direct import of Non-English goods was forbidden to the colonies. Lacking typological evidence to the contrary it is assumed, following standard procedure, that tin glazed wares are English. This assumption is made, both for nondescript pieces and for more elaborate, potentially diagnostic pieces that show stylistic parallels with Non-English European wares. The latter may simply be influenced by the non-English centers in question.

One well preserved polychrome plate with a floral pattern of decoration (GTC006) can, on comparative grounds, be identified as of specific English origin (see page # in body of the report). Italian, Spanish and Dutch wares, however, share a number of stylistic traits with English tin glaze pottery (Baart 1987; Wilcoxon 1987; Caiger Smith 1973). The remainder of the tin glazed wares are also assumed to be English, lacking any specific comparative evidence to the contrary. Until chemical analysis and data interpretation have been completed for these samples, this tentative English source assignment must be retained.

Several of the twenty four representative pieces sampled from the collection deserve specific comment:

- 1) The thin-lined reserve motif on sample GTC002 is derived from the decorative traditions of the Tuscan town of Montelupo (Hurst et al. 1986:17,fig. 4), a tradition that also exerted significant influence on Dutch tin, glaze wares from the sixteenth century onward. For an example of the latter see the checker-board motif shown by Baart (1987:5,fig.4).
- 2) The Polychrome type Figure # (GTC008, GTC010, GTC021) with its bold-painted floral motif on an Italian type broad-brimmed plate-form is very similar to the blue-on-blue and blue-on-white tradition that originated in Liguria (Lister and Lister 1987:144), also called the Beretino style, and imitated by Italian potters in Seville. These somewhat earlier Italian and Spanish parallels had a turned ring-base unlike the Gott's Court example.
- 4) The well preserved footed 'punch bowl' (GTC009) is a fine blue-on-light blue ware. It is similar to as yet unpublished pieces found in Spain and Spanish Florida. One such piece was excavated in

Seville and analyzed by activation analysis at the Smithsonian Institution's laboratory facility. The composition of that example indicated a Mediterranean origin.

- 5) A circular chain motif, created by overlapping and undulating lines, occurs on a number blue on white vessels in the collection (GTC015, GTC022). These vessels, though much more crudely painted, resemble Dutch majolica of the Seventeenth century (Wilcoxon 1987:64, upper left), and a seventeenth and Eighteenth century Spanish type called Sevilla Delft-Like Blue on White (McEwan 1988:249). The latter type, which was originally described in the literature as Dutch (Council 1975), has been found in archeological contexts in Puerto Rico that can be dated to between 1784 and 1800 (Solis 1988). The style corresponds to a period in the Dutch and Spanish tin glazed sequence, during the Eighteenth century, when there was extensive imitation of Oriental porcelain motifs (Pleguzuelo 1985:89, plate 69).
- 6) An anomalous sherd (GTC005), is not compatible with this fine ware eighteenth century tradition. This is a thick, crudely painted polychrome piece. This simple bowl form is incised along the lip and parallel to it. It could be somewhat earlier than the rest of the collection.

#### PLAN OF WORK

The objectives of our planned research are to identify production sources and source relationships of tin glazed ceramics imported to Maryland in the Eighteenth century, and ultimately to document the relative frequency of the ceramic types identified in a variety of archaeological contexts. As the work proceeds, new and existing collections will be examined visually and compared with artifacts illustrated in the literature and from likely and possible production sources. Selected pieces will also be sampled for chemical analysis as with the Gott's Court collection.

As project budgets allow, samples will be submitted for analysis in batches of approximately fifty each. Analysis will be carried out by the Archaeometry Group at the University of Missouri's Research Reactor under the direction of Drs. Michael Glascock and Hector Neff. The analytical system there is designed specifically for archaeological applications and has recently expanded with support from two major grants from NSF's Anthropology Program (Glascock 1989; Neff 1992). The services provided at Missouri will include statistical analysis and source interpretation as well as the chemical analysis itself. The author will provide archaeological and analytical expertise as well as comparative data in support of the Missouri group's efforts. Comparative data will come from over 1,000 analyses entered by the author into the Smithsonian's Archaeometric Research Collection and Records (SARCAR) and from the British Museum's Research Laboratory, through data sharing arrangement established by the author with Dr. Michael Hughes.

Also as the project develops, historical and typological expertise of specialists in eighteenth century archaeological ceramics of the Mid-Atlantic Region will be enlisted. This will assist, both with the visual identification of problematic pieces, and in refinement of problem focus.

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**APPENDIX VI**

**TRANSCRIPT OF INFORMANT INTERVIEWS**



EDITED EXCERPTS FROM CONVERSATION WITH  
MARJORIE QUEEN GIBSON AND MARY HILLARY CHEW

[12 - 15]

MARJORIE GIBSON: I was born on the corner of Calvert and Northwest. Right here, where the Arundel Center sits, was a big house, and my family lived in it, and that's where I was born January 7, 1921.

[25 - 42]

I first married at 16, when I graduated from high school. There wasn't any money to go to college. I had to do something, so I decided, "I'll go ahead and get married." But he didn't live very long. He died at 19, and I was single for three years and then I remarried. And I've been married 49 years now to this husband I have now. But we're not talking about me.

MICKEY MORAN: You had mentioned that you played in Gott's Court?

MARJORIE GIBSON: Oh my God, yes. Did I ever!

MARY CHEW: You could cut through from Northwest Street to go to Gott's Court, and then you could cut Calvert Street to go to Gott's Court. You see, everything was close together.

MARJORIE GIBSON: It had three entrances, one on West Street, one on Northwest, and one on Calvert. You could get to Gott's Court either way. And there were two-story, joined, row houses. I don't remember any single dwelling, you know, totally detached. Everything was sort of...rowhouse.

MARJORIE GIBSON: On Northwest Street, I remember Dr. Johnson's Hospital, I remember Hick's Mortuary, I remember Dr. Garcey's private home.

[45 - 57]

MARY CHEW: You know we had a USO on Northwest Street, too.

MICKEY MORAN: And where would that have been located?

MARY CHEW: Located? A half a block below the Church.

MARJORIE GIBSON: USO during the 1940s. It must have been 1940s, because most of the Annapolis girls married sailors around that time. My mom threatened me with death if I looked at a sailor. That's how come I married a soldier.

[77 - 93]

See, there was total segregation. Total. The schools were segregated. Everything was segregated, and we had our own everything. On the corner of Calvert and Clay, the pharmacy, Dr. Thomas, we had a soda fountain in there.

We had Dr. Thomas who had a pharmacy. We used to go and sit up on the stools, and get our sundaes and ice cream. And there was also Dr. Holland, Popeye's father, who was a foot doctor. Then we had the black theater, the one theater that was owned by the Einsteins.

I used to be in a revue when I was 13. I had a cousin who was a tap dancer. And unknown to my mother, he got us young girls together and he taught us this routine, and we were the Rockettes of Annapolis. And the night of the show, the theater was loaded with people, and we had little things here and little things here [illustrating her costume] and we were out there doing our [illustrating high kicks] and somebody went and told my mom. My mother was 4 foot 11 and weighed 86 pounds, but boy, was she strong. My mama came in that theater, down that aisle, upon that stage, and took an umbrella -- she was lefthanded -- and she whacked me off the stage and whacked me through the street, and for six months my mother punished me every day, because I was dancing and she said it was common, and she wasn't going to have it.

[100 - 103]

Now what other business places did they have?

MARY CHEW: I was a cashier at the first theater that they had, the oldest for colored --

MARJORIE GIBSON: -- Only black theater they ever had.

MARY CHEW: -- that was Calvert Street and Northwest Street.

[112 - 144]

MARJORIE GIBSON: Then we had the black Elks Club on Northwest Street where the socializing went on. It is still on Northwest Street, but urban renewal came through and they had to move into another building. But it's still there.

Now what else was there? On the corner where I was born, that became a restaurant -- Pollyran -- and it was a nightclub. You know, my Uncle Johnny Hotcakes used to own it. He ran it at one time, and then Mr. Polly and Randall ran it, but the first original name I don't know. But I remember when it was the Pollyran. That was because Mr. Polly and Randall went in business together and they named it Pollyran. That's Calvert Street, on the corner of Calvert and Northwest where the Arundel Center sits right now, that was a restaurant.

And then, how about Annie Harris's mother? She had a restaurant somewhere right there between St. Philip's Church and the Pollyran, on that half of the block there. Ms. Evelyn Harris had a type of little restaurant. She sold sandwiches and soups and stuff to the boys working in the coalyard. The Lingam family also had a coalyard down on Calvert Street.

MARY CHEW: Then on my side was Mr. Wolf, who was a tailor, and his family. That was about the third door down from me.

MARJORIE GIBSON: On Northwest Street. That's where all our Sunday School pennies went. We'd always get a penny to put in Sunday School and we always bought candy.

At the back of St. Philip's Church there was a hall. This is where we went to public school. I remember learning ABCs and learning to count by the time I went to first grade. I was 4, because in those days you could go to school when your parents sent you. You didn't have to be 6 in January.

The only games kids played in my time was school. Everybody learned their alphabet by the time they were 3 or 4, because this was the way it was. In the winter time you couldn't play outside and you'd be inside. I studied by lamplight, let me tell you. My grandmother wired that little house. She paid for it, \$92.00, back when I was in the first grade in '25, so this is '26, we still had lamplight. And they paid the gas and electric company to come in there and wire their house and they paid 90-some dollars for it.

[146 - 173]

MARY CHEW: Did you know the A&P Store right before the USO?

MARJORIE GIBSON: Yes, I do. Was it A&P, or American? They moved it on West Street, up on the corner.

How about the Punch & Judy shows? Close to the West Street corner, there was a big lot where the freight trains came down, all the way down, and put stuff off for Henry B. Miles. Henry B. Miles had a storage shed up on this vacant lot between Calvert and Washington Street. And that's where the Punch and Judy shows used to be every summer. The Punch and Judy shows used to come and you'd see them knock each other, you know.

And when the trains were running up and down West Street, the midshipmen would always walk from the academy in formation, catch the train right at the top of West Street and Cathedral, right after you passed Cathedral. Remember the old train station? It was right across from Asbury Church. The middies would come up with their box lunches and they would always share their food with the local kids. And hundreds of kids would be out here to eat those sandwiches and stuff, and then when they came back from whatever game they played, win or lose, they did the same thing, whatever lunch boxes -- the chicken legs, and the oranges, and the apples, and the cookies. And the kids would be clamoring around that train like little bees. And the middies would give us their food, you know.

MICKEY MORAN: So what time period would that have been?

MARJORIE GIBSON: Between 1925 and...what? I can't remember when the trains were done away with, but it would be early thirties. How about the forties? I can't remember. I married Gibson in '43, and I moved in College Creek Terrace, which was public housing. I can't remember whether that train station was still there then or not. But let's say between '25, thirties, and early forties.

[175 - 181]

Part of the track is still there, but I'm talking about the building, the big old station where we used to catch the train to go to Baltimore, the old big station that was right across from Asbury Church, right across from Gott's Court.

You see, Gott's Court is now a parking lot, and they have those townhouses down in there. But when that was all black, they were second-story joined houses, rowhouses actually. And the train station, you walk out of Gott's Court, here's Gott's Court and here's the train station, just like that. Now, can you remember that old one-story building?

[184 - 185]

I got on that train many a time you know. I used to run all of the way through town, all up and down Main Street.

[199 - 206]

MICKEY MORAN: Do you know when electricity would have come into the area?

MARJORIE GIBSON: Electricity was in the area, except that we didn't have it in the house. How about your house?

MARY CHEW: Well, my father was an electrician, so I had it. He worked at the Naval Academy.

MARJORIE GIBSON: We had an aunt who was housekeeper for Dr. Malone. Dr. Malone had his office in his house and Aunt Pricilla was his housekeeper. They had a big house with a bathroom. We also had outside toilets. We used to decorate the toilet with our schoolwork. But electricity came a long time, it's just that the house that we lived in did not have it. Gott's Court probably didn't have it either.

[208 - 213]

The rent on the house that I lived in all my life was \$11 a month. I distinctly remember that because I paid it for my mom every month. I was the oldest child, so I used to do the cooking, the washing, the ironing, and the paying of the bills for my mother. I remember many things, and I'm so happy that I was raised that way because today there is nothing I can't do, if I put myself to it. There is no such thing as "you can't." You never know what you can do unless you try.

[231 - 236]

MARY CHEW: I volunteered my service for three years on Washington Street, the same school that I got my education, my learning from.

MARJORIE GIBSON: Stanton, you graduated Stanton. I was in the second freshman class. I went to Stanton School, too, because Stanton School was the black school that had grades from 1 to what, 10? From 1 to 10.

MARY CHEW: You had a high school -

MARJORIE GIBSON: One to 10, the whole thing was in that one building.

[238 - 249]

MARY CHEW: To 11. The high school was a four years affair. So, my education from there, see, well that was seven, and four, eleven.

MARJORIE GIBSON: I thought it was 10, because right now it's twelfth grade. When I graduated in 1937, we had 11 years, and I thought in her day that it was less, but I see what your saying. You had 11 then and today it's 12.

When the population in school got too much for the little building -- the building is still standing there, you know, it's a recreation center now for young children. It's still there and every black person who ever went to school had to go there. It was the only school, and then when the classes got so large, I went to fifth and sixth grade over at the community hall on Calvert Street. Then seventh grade I went back to Stanton and we were the second class that went as freshmen into Bates High School. I went to Bates High School in 1933.

[252 - 263]

MARY CHEW: Professor Toomey, that was my teacher. He was the one who came from Baltimore at that community center. My fourth year, there was Victoria Samuels, anyone who could sing in those classes. We had instruction right there, he came down from Baltimore. And he carried our group --

MARJORIE GIBSON: She could sing. This child had a voice like a mockingbird.

MARY CHEW: -- to the Lyric, you know where the Lyric Theater in Baltimore? Well, I got on that stage.

MARJORIE GIBSON: You're talking about as a school student. I went lots of places that I don't even remember, because for five or six years I won the statewide reading contests, and spelling bees. I won statewide spelling bees, and every single reading contest that I was ever in, I won it, statewide. And as a youngster, like 10 or 11, I was taken to wherever they would hold it in Baltimore, but I did not know where I was, and I don't even remember, but I do remember winning.

[267 - 274]

MICKEY MORAN: You had mentioned there was a school in back of St. Philip's. Was that for younger grades?

MARJORIE GIBSON: It was part of the church. It was a hall where we had our annual fundraisers and our suppers. But they taught arts and crafts in the summertime, and then in the fall -- there was vacation bible school -- but, didn't children also learn to read and write, didn't they have an educational structured classes for children prior to entering first grade? Because I seem to remember having instruction in numbers and things, and in spelling, before I even entered Stanton School. They used that hall for just about everything. It was a community hall.

[281 - 289]

We're trying to establish the things that went on. I need to ask you [Mary], to your knowledge, the history of the Church speaks of St. Philips being sponsored by the white women of St. Anne's. Before slavery ended, it's apparent that the slaves in our family were owned by members of St. Anne's Church, because whenever someone would have a baby, the baby's birth would be recorded in the records of St. Anne's. And some of Grandma's children -- she had 13 kids -- some of the births of her children, Phoebe told me because Phoebe and I have been friends for 40 years, Phoebe told me that there is a record of Harriet Green McPherson's birth, so obviously Harriet's mother, we know she was a slave, but was Grandma a slave?

[294 -295]

Grandma was born 1845 and died 1932, and her husband Alexander was born 1841 and died in 1913.

[297 - 303]

You were the one who told me about Culpeper, Virginia. His father was his owner, and he turned his son loose, and gave him a couple of dollars and sent him north, from somewhere in Culpeper, Virginia, just prior to the end of slavery. They say he came into Parole and he met her, because she was an Annapolis girl. In Camp Parole, where I live now, this was an army post. And they had army tents all out there, so I hear. And he came back from Culpeper, Virginia, and he told me he stopped some other where before he got here. But he ended up in Annapolis, because he ended up marrying Harriet Green.

[306 - 310]

What we're trying to do is draw a picture of Annapolis, as far as Gott's Court, Calvert Street, Northwest...this is what we are trying to recreate in a sense, and these facts that we are talking about now may not have any bearing on what you are looking for, but since they are a part of who we are they are necessary that you know some things about how we got to be who we are.

[327 - 337]

Poor as we were, my mother used to take children in, and we lived in a four-room house. I remember my mother putting pallets on the floor and having children sleep on them. I also remember my mother went to the naval academy laundry, which is where she and my grandmother retired from. My mama would always go down there around five in the morning because the boys who cleaned for the midshipmen's barracks, all the clothing that the midshipmen would put in trash cans, the boys would bag these clothes up and give them to the ladies. The ladies would wash them, bring them home, and give them to children. My mama kept boxes of shirts, underwear, shoes, stockings, you name it, and she would share with any child in the Annapolis area who needed things.

And my mama took in three boys that didn't have a place to go for some reason. My brothers -- I had three brothers -- my brothers would bring children home. My mother would feed them. We didn't have enough food all the time, but we always

had something. I remember eating oatmeal and bread for dinner, for years. By the time Thursday would come, all the money would be gone.

My mama made \$8.73 a week, and I know because I picked up the check. I walked to the naval academy, picked up her check, she gave me the shopping list. When I was 10 years old, I was doing the grocery shopping.

[339 - 394]

But she always found a way to help. This is the thing that I learned from her. Poor, \$8.73-a-week salary, clean, oh my God, my mother was a fanatic about cleanliness, you could eat off of our floors. We didn't have anything on them but linoleum but it was clean and shiny. And her toilet, we had an outside toilet, my mama used to put wallpaper all over the toilet -

MARY CHEW: That's the style.

MARJORIE GIBSON: -- and all of our schoolwork would be tacked up on it. But we did have a flush seat in that outside toilet. Mama didn't. Mama's toilet was a two-hole thing in the backyard, in the summer house, but it had no flushing capacity. We had a flusher.

MARY CHEW: You don't know about this. They used to have a man to go around, just like over on the Eastern Shore, and clean their toilets out, and they didn't have the modernistic things.

MARJORIE GIBSON: I know that, Mama didn't. Mama had a two-seat toilet. It had two seats in the summer house where she'd hang the meats. My great-great-grandmother married a man from Lothian, Mr. Mason was her second husband, and Mr. Mason's family had a farm, so they shared vegetables and meats, when they killed the hogs, and I can remember seeing hams and things hanging up. But at the same time this was where the bathroom was, too. It was a summer kitchen. It had a stove in there, and Mama used to cook in there in the summertime to keep the house cool. The toilet was in one corner, and it had a private door, but she had two seats in there. It was a wooden thing with two holes and two people could sit in there at the same time. I can see that just like I'm looking at you.

The funny thing is I never called my mother anything but Dola, I called my grandmother Becky.

MARY CHEW: 'Cause your great-grandmother was Mama.

MARJORIE GIBSON: But why? I can only remember as far back as I can go, the face which I see the most is Mama. You see, Mama was a housewife, a little short fat lady who wore a big white apron with pockets, always something good in the pockets. Goodies in one side for children, and corn for the chickens in the other, because Mama's chickens used to walk in the kitchen. But I cannot figure out why would I call my great-grandmother Mama unless I spent a lot of time with her.

MARY CHEW: You did.

MARJORIE GIBSON: I had to have. That's what I remember most. Eating at her table. But I also have memories of my mother's kitchen and house, too. I slept at my mother's, I never

slept anywhere else. We were taken to my grandmother's before my mama went to work at six o'clock in the morning, and we would go there for our lunch. We always went home for lunch because school was within walking distance. And I never saw a bought loaf of bread until I was almost as tall as I am now.

MARY CHEW: No, they made bread.

MARJORIE GIBSON: They made everything. Mama had those tin boilers with tops, homemade bread. In the mornings we would have either flap jacks, biscuits, or quick breads. Lunchtime we'd go home we would also have quick bread, but nighttime we'd either have hot rolls, or homemade bread. And stockpots. The only place that I've been that was similar was New Orleans. When I started to go to New Orleans for the Mardi Gras, I began to observe that everybody's kitchen had a pot. They keep gumbo pots on the stove at all times. Mama had a stockpot. It never got sour, and she threw everything that was left over at the end of the day in the stockpot, and in the winter time, that stockpot was always on that back burner there, and you could come in and eat any time you want, and Mama also fed people in the street. Boys, winos would come by and they would say, 'Miss, could you give me a sandwich?' and Mama would bring them in the house, and make them wash -- they always had to wash their hands, God she was -- "Wash your hands!" We had a cold water spigot in the kitchen. She'd make them wash their hands, and she'd sit them down, and she'd feed them.

I wasn't poor. See, poor is a word which connotes a lack of. The only thing we didn't have was money, because we sure had everything else.

MARY CHEW: You had brains, though.

MARJORIE GIBSON: Brains and love. Oh, boy. And I grew up watching a family that shared. Everybody shared with everybody else. And even up in Feldmyers Court when I was with my mother, up in her house, whoever had a pot on the stove all the kids would eat. You'd take the kids in the house with you. Your mother would put enough bowls out for everybody. You didn't know where your next meal might come from, but you always had something. And I never knew want. I don't ever remember being hungry in my life, simply because there was always something. We ate oatmeal a lot of evenings back then.

And I also remember making hamburgers and gravy. You know, I remember, too, when I was real young, I remember being on an orange crate washing clothes in that cold water sink and making hamburgers and the gravy. We would have maybe six balls of hamburger and 10 gallons of gravy and I did not know exactly how it was done. When I'd make the thickening, we'd have balls of dried flour in it. So therefore, when I would stir the thickening into the water and essence from cooking the hamburgers, these dried balls of flour would be floating in the gravy. I remember Bodie, my oldest brother who's in California now, and the one that got killed during the Korean War, Donald -- those two were the only two at that time -- I remember them crying because my mother made them eat this gravy with these dried balls of flour. But let me tell you, I learned to make gravy without a lump, and I don't need a whisk or a beater.

I learned to do things by doing. I remember wallpapering. My mother used to put new wallpaper up every year, and paint the baseboards and stuff, and I remember



always being there to help. I remember when the windows were coming away from the house. My mama used take cloth and old rags and shove back in the holes. Then you'd take unbleached muslin and wallpaper paste and you'd fasten up the crack were you put the rags, then you'd paint over it or put wallpaper over it, and who would ever know that these rags were back in there? But your house was comfortable.

MARY CHEW: You were taught to be clean.

MARJORIE GIBSON: I'm telling you, my mama was a fanatic about cleanliness. She really was, bless her heart. You know Dola's been dead 17 years. My, the time flies, seems like just yesterday.

But anyway, speaking for me, I grew up not knowing what poor meant. I never felt poor. My clothing was always handmade, but then I thought, 'Doesn't everybody make their children's clothes?'

[434 - 459]

MICKEY MORAN: How many brothers and sisters did you have?

MARJORIE GIBSON: Brothers? Well, I never had sisters. My mom had three boys. One child was stillborn, simply because it was 15 pounds and it choked on its umbilical cord. No, she had four boys, because three of them lived. Bodie is the oldest, Reginald, next was Donald. Donald got killed in a plane crash during the Korean War. Then there's Gary. Gary just retired with 30 years in the Green Berets. He's a paratrooper. He just retired. So there's three boys and myself, and I'm the oldest.

Because of segregation...My oldest brother came back to America from Germany with a German wife and two kids. And the police told my brother he had 24 hours to get out of town, because blacks and whites were not allowed to get married. And so my brother left Annapolis and he moved to California. He has never set foot in Annapolis since, and he never will now because Bodie's been in a wheelchair now for two years.

I'm the oldest. He's 68...he was born '23, he'll be 69 this coming April. Then the next boy, Donald, was 19 and he went in the service straight out of school. He got wounded six months after he got in Korea. They were sending him back to America, and the plane crashed in the state of Washington and burned for three days. Eighty-seven boys died in that plane crash, and my brother Donald Maurice Queen was one of them. And then my youngest brother, he graduated from high school and he went straight into the service. And he just retired with 30 years in the Green Berets.

MARY CHEW: You all had a strong-willed family.

MARJORIE GIBSON: Well, see my husband was responsible for my brothers going into the service, because my husband was military. I married him, he was in the Army, and the boys thought he was a god. They loved to see him in that uniform and they all decided that that was what they wanted to do. And so they all went in the service, and they did well. I tell you my mom, she should have felt very good about her

children, because not one of her children was ever a problem. Not one ever gave her any trouble. And I think she was proud of it.

We [she and Bodie] always used to hassle when we were little children. For a while it was just the two of us, my oldest brother and myself, because I'm 16 years older than Gary. But anyway, when we were real little, I remember when my mom used to spank me, my little brother Bodie would fight her, he would kick and he would hit, because she had hit his sister, you don't hit his sister.

[585 - 601]

When my first husband died in 1940, I was 19 years old. I had a young baby. Never worked a day in my life. Didn't know how to do anything but housework, cleaning. I remember the frustration, and the futility that I felt. Dear God, what am I going to do? How am I going to survive? But I knew that I would survive, because I am a survivor. I went down in the white neighborhood and rapped on doors looking for work and I found work. I did days work, I worked in hospitals, I worked in laundries. All of this is prior to going to business school. The Federal government sent me to business school, but that's another story.

I went and found work because I certainly wasn't going to steal for a living. I earned enough. My mom was still alive, and my mom was a big help because naturally I moved right straight back home. Where else was there for me to go? Growing up, I never saw hopelessness or futility, because you always knew that you could get out of this situation and all you had to do was give it your best shot. And you knew you could get out of it. And when I think about that little shacky house I grew up in, and think about the home I live into today, and see how far we have come....

[699 - 701]

MICKEY MORAN: We found some bottles that were still intact. I wonder if any of those are familiar to you?

MARJORIE GIBSON: Oh, yes, these things were in use when we were young.

[710 - 741]

Everything came in bottles.

Dr. J. W. Bulls Cough Syrup! How about that? Holy cow! See here, puss. Dr. J. W. Bulls Cough Syrup.

MARY CHEW: Yes!

MICKEY MORAN: Was this something that you might have used?

MARJORIE GIBSON: Yes. Sure, commonplace. People bought this for their children. We bought this. But we also...a homemade remedy for a cold was a teaspoon of sugar and three drops of coal oil. That was what we got to break phlegm. And in the summer -

MARY CHEW: And we had lemon and pure lard.

MARJORIE GIBSON: Yes, lard and sugar. Mama used to make sassafras tea for the spring. And sassafras tea, pitchers of it, stayed in the refridge. So all day long, instead of drinking Kool-Aid, which wasn't even made, you would drink sassafras tea. And the coal oil and sugar. I remember seeing Mama take that spoon full of sugar and she'd drop...and don't leave out the castor oil every Friday night. The big crocks that they used to drink out of were made out of a heavy [material], like oven-ware today. You know the little crocks with the metal caps that honey used to come in? Mama had a summer kitchen and in there was everything made by man. She made everything, watermelon rinds, brandy pears, applesauce. People didn't buy stuff in the store. I told you I never saw a loaf of bread until I was about 12 years old, other than homemade. And everybody had pantries, everybody had somewhere where they would make a little pantry, and that's where you would keep your foods.

MARY CHEW: Then they used to have barrels in the cellar, and newspapers, for the watermelon and cantaloupes. You had it for wintertime. See, right in their cellar, they had everything. And they'd wrap it in this newspaper --

MARJORIE GIBSON: Potatoes. My father-in-law was a farmer and to keep potatoes you keep them in a dark place, you put them on newspaper and you don't let them touch, and you put lime on them. And you can keep potatoes, I've kept bushels of potatoes like that. But this amazes me, J.-- Oh, when I think of all the bottles and jars and stuff that got thrown away. J. W. Bulls Cough Syrup. Oh my goodness.

MICKEY MORAN: How often would you go to a store? What items were you dependent on?

MARJORIE GIBSON: Not much.

MARY CHEW: No.

MARJORIE GIBSON: Your meats came from your relatives in the country. Everybody had somebody in the country, and they would share their meats. When they would kill their hogs, you would get hams, and sausage meat, homemade stuff like that. Now vegetable wise, they also brought you vegetables by basket, and then we had hucksters. Remember the horse and buggies? We had horse and wagon hucksters going up and down the streets selling their wares, and that's where you bought your fresh vegetables. Winter and summer, and fish, mostly off of the wagons. But I don't remember going to many grocery stores.

[757]

MICKEY MORAN: Here we have some type of figurine.

[762 - 769]

MARJORIE GIBSON: You see, evidently when you worked for white families, they would give you these types of things. Because I'm more than sure black people did not have the money to buy a lot of expensive things. But they owned a lot of nice things. And I think maybe they worked for wealthy families who would give their children things. Because Mama's kitchen -- Mama had all claw-foot furniture, her bedroom set had

lion's feet, her dining room furniture had lions feet, and, my God, don't forget that red velvet horsehair couch that Mama had in the living room. The horsehair would stick in your butt, it would come through the velvet.

[779 - 784]

This [dish fragment] looks like a slop jar top. Because you see, we had china slop jars. Everybody had a china slop jar, and they had tops. But this [design] lets me know this what not a slop jar, because of the decoration. Soup tureen, looks like, everybody had those too. Where you'd set it up on the table.

MARY CHEW: Soup with beans in there.

MARJORIE GIBSON: Yes, family service. Everybody ate family service.

[786 - 791]

This is what we grew up with. You always had your food on the table, where everybody could pick out whatever they wanted to eat. Family style. Yes, this is definitely not a slop jar cover because it is decorated like dinnerware.

MARY CHEW: You had the big spoons, you put the top down on there.

[895 - 899]

MARJORIE GIBSON: This looks like it could be a bowl. You see, in those days remember, there were no gas cook stoves. There were only coal ranges. Everybody had coal and wood ranges. And in the summertime, everybody would take the chimneys off, shine them with stove polish until you could see your face in them and shove them up against the wall, and the chimneys were stored until winter came again.

[901]

They had to keep the house comfortable, nobody had air conditioners, or fans.

[915 - 943]

You see this? A long time ago, every child had a tea set. A tea pot, sugar bowl, a creamer, and the baby cups. And I don't know what happened [to mine]...but somewhere along the line I guess it went to Goodwill, because you do give stuff away. But this is what reminded me of it, because they were always made out of this shiny color, those little tea sets. They were always like that.

MARY CHEW: They entertained you know, little children.

MARJORIE GIBSON: Yes, the kids used to play with their little pinkies sticking up, and they had their little cups. I think everybody had one of those. It was one of the favorite things that little girls had.

MICKEY MORAN: What other games did you play?

MARY CHEW: Well, we always had football. I mean, not football...batter, one, two...what you call that? Hit the ball and it goes in the yard?

MARJORIE GIBSON: Baseball.

MARY CHEW: Yes. And jumping the rope, double jump rope they had.

MARJORIE GIBSON: Jump rope and jacks, oh gracious, everybody learned jacks. And marbles. I could shoot marbles like a champ. Marbles, oh yes, child. I could shoot, I could take an aggie -- aggie was the most expensive one, that must have cost 10 cents -- I could take an aggie, you know you draw your circle, put your marbles in the middle, take your aggie, and you take your finger, and you struck the aggie and you broke the whole...it was just like a pool table, only this was marbles on the ground. And jacks everybody played.

We used to have scooters. We made all of our toys. We had home-made scooters, we'd go to the dump and get wooden boxes. And put skate wheels and make wagons. And ice-skating, roller skating.

You see, every street in Annapolis leads to the water. Most of us didn't have ice-skates. I got my ice-skates second-handed from an officer. I was working for three naval officers -- Commander Berry, Commander Buckum, and another guy, I forget his name. These three men were unmarried and they shared an apartment and I used to clean for them and go back in the evenings and cook their dinner for them. And one of them sold me a pair of ice skates for five dollars.

Well, whenever the river would freeze, it would freeze three feet of ice. And we always knew when we'd see the midshipmen, it was safe, because they had testers. They paid people to go test the river. When we'd see midshipmen out there gliding, we'd go out and glide, too.

Ice skating, and oh God, don't forget sleigh riding. My God, the sleigh riding was the thing. Clay Street Hill. Get up at the top of that hill, take a running leap, belly whoop on that sleigh and your sleigh would go all the way down to the water. Oh yeah, we'd do a lot of that kind of stuff. Coloring books in the winter when you couldn't get out much. Games, I don't remember too much because we played school all the time.

MARY CHEW: Well, let me see now. Checkers. And dominoes.

MARJORIE GIBSON: Yes, everybody owned checkers and dominoes.

[948 - 949]

I was a tomboy, too. I always did everything well.

[951 - 955]

But my mom always made me feel sorry that I was girl. She used to kid about it. And she'd thought it was a joke, but it used to hurt me. People used to come, 'Hi, Aunt Dora, how are the children?' And she'd start telling what this one did and that one did, and I can remember pulling my mother's dress, 'Here I am down here.

I didn't hear you calling my name. Did you tell them what I did?' It was like, I was a girl, you know, dumb girls couldn't do anything. So I always had to compete. I was always competitive, and I always made sure that I would outshine any boy. Anything he could do, I could do it better.

[957 - 973]

I jumped off the Shortline Trustle, which is 50 feet up in the air, but I did it on a dare. I could never admit to being afraid. And if you said I was afraid, I would do it. We used to have a game. We'd wait for the toot, toot of the freight trains, and then we would start at a starting point on the trestle. We had it down to a fine science. You could close your eyes and pace yourself. Mind you, this thing is 50 feet up in the air and holes between the rails where you could slip between, but you never thought of that because you knew you could do it with your eyes closed. We did it everyday during the summertime. We'd pace ourselves.

And there was one little partition about this big midway. This was for any person walking across the trestle when the train would be coming. This was for you to step out there till the train went by. Well, one day I didn't make it to the little house. I mean, I was moving just as fast as my little short legs would move. And you see, you got this rhythm in your head. That's what gets you on the rails, that's what keeps you going. The rhythm gets in your head, you know, and you pace yourself, like the guys during the Egyptian days, the slaves in the bottom of the boats. Consequently, you move to the stroke of the beat. Here I was, running, and everybody was screaming, and I knew that I wasn't gonna make it to that house because I could feel almost feel the breath of that freight train on my back. So you know what I did? I held my nose, and I jumped the 50-foot bridge. And guess what? My foot got caught there in the...you see, what holds it up are pilings and the pilings are threes, my foot got down in there and I couldn't get it out. And the boy who came and got me, he died years ago, Charles Chase...Charles realized that I wasn't coming up. I hadn't bobbed up. He came and got me, and he twisted my foot and got it out of there and brought me up.

[974 - 984]

The Marina Mercedes was a house for sailors in the Naval Academy. It was a ship. Five to six hundred sailors lived on it. Six of us would get in a rowboat. And we'd would row, from Northwest Street to the marina....One day President Roosevelt passed us in a yacht. And we caught the waves. You see, the trick to a rowboat is, let the bow hit the wave, 'cause if it hits broadside, it capsizes. [We were] kids, dumb, 12, 13 years old -- we waited until this big yacht, some other yacht -- it was a speedboat -- when the speedboat went by, here's this huge wave and we turned, we rode the boat so the bow would hit the wave, because that what makes it ride. God sure must love us little dumb kids because nobody ever drowned. Nobody. I don't remember any child ever drowning.

Then we had a swing, a rubber tire out over the river. And you'd go climb a tree, and you'd sit in that rubber tire, and you'd swing out over the water. And the guys would jump off because they could swim. Well, see I didn't want them to know I couldn't swim, so I jumped off, too. Well, somebody always came and got me.

We used to have a lot of fun. We were happy kids. I played with boys. I played with boys all the time, because I didn't have any little girls in my house. They told me if I couldn't do what they could do, that I couldn't play with them. We were happy kids.

[986 - 994]

MICKEY MORAN: Was there a big difference in say, the chores that boys and girls did?

MARJORIE GIBSON: You betcha. I don't remember seeing my brothers do anything. They were never taught to wash dishes, cook, wash clothes. I did. In my house, I did the chores. When my mother would paper the walls, I could never remember seeing...well see, first of all, in my family, I could only say, I was oldest. My oldest brother was a year and six months younger than I. I do not ever remember seeing Reginald doing work. The other boys came along later in life, you know, and Bodie and I were 11 and 13 when the third boy came along. So, it seemed that women always taught girls to do everything.

MARY CHEW: The housework, uh huh. Yes. But now seemingly men can do just as much work as the women used to.

MARJORIE GIBSON: They always could. It was just the way women felt. There were certain responsibilities which were feminine. Female. Boys weren't supposed to wash dishes. Why not? They eat out of dishes, don't they?

[1002 - 1023]

[After inspecting more glass artifacts]

That's another thing. People didn't drink in the homes like they do today. In my house, I never saw no booze. My Uncle Crawford used to have his booze. He made his own homemade liquor for Christmas. He would set his crocks, he had the crocks behind his stove in the dining room and the raisins and all this other stuff. And as children, I never will forget when we were about 11, he used to make

--

MARY CHEW: Corn whiskey.

MARJORIE GIBSON: -- no, but what's that other, not root beer, the other beer.

MARY CHEW: Home brew.

MARJORIE GIBSON: Home brew. Everybody had home brew.

MARY CHEW: Indeed they did.

MARJORIE GIBSON: But my uncle used to make it. And you know what? I remember one time we took a teacup. Uncle Crawford went to the front door to answer the door, and we took a teacup and a spoon, and went down between all these maggoty looking ugly raisins and stuff, and we scooped up a couple of spoons and put it in this teacup and we drank it. It was strong enough to cut your tonsils out.

MARY CHEW: The more it sits, the stronger it got.

MARJORIE GIBSON: He always had a little still on the stove. I don't know anybody else, because his was the only one I saw. His was a little thing about this high on the stove in the kitchen, and they ran this wine that had set, through these coils, and it came out pure white liquor. But this was only for the Christmas holiday. This was to make your homemade eggnog.

[1014 - 1033]

MARY CHEW: And you had chocolate sips, hot chocolate.

MARJORIE GIBSON: I know. That was our weekend pleasure. Chocolate sips. Everybody had them. On weekends. Cookies and cakes. And dances. You played the Victrola, wind up the Victrola --

MARY CHEW: Old time Victrola.

MARJORIE GIBSON: Wind up the Victrola. And everybody had chaperons. I'll never forget it.

MARY CHEW: Oh yes, yes indeed. Couldn't go to a dance, unless somebody --

MARJORIE GIBSON: I threatened to commit suicide. My mom told me I couldn't go to junior-senior prom without [one]. Guess who my chaperon was? My godmother Marie. And the boys gave Marie six cans of beer and made her drunk so she went to sleep. Junior-Senior Prom was held in a pavilion down at Carr's Beach, and my mama said I could not go unless I had a chaperon. And I was the only girl at that time who was forced to take her godmother. And I swore I'd commit suicide, and my mama said, 'Why, I'll help you.' But I had a good time because Marie loved beer and they gave her six beers and she went to sleep and I danced up a storm. Oh, the good old days, thinking back. It was so much fun.

MARY CHEW: Well, we didn't have all of this trouble that we have now.

MARJORIE GIBSON: Murder and drugs. And smoking. My God, I'll never. When we used to go to basketball games around the Armory, once in a while, some of the children apparently had fathers who drank beer. So somebody would steal a can, hear me, a can, of beer, and they'd have six or seven straws in this one beer. And everybody would take one sip of beer, and then you'd act silly, because this was your "high."

MARY CHEW: And remember, too, during that time, day and night, all the houses stayed open. Didn't have to lock no doors, did you?

MARJORIE GIBSON: You could go to New York and leave your house unlocked and find everything in place when you came back

MARY CHEW: Isn't that something to think about?

MARJORIE GIBSON: Yes, it is. Today there's so much violence. Well, there was a lot more love. And you know, even race relations...it's the strangest thing. It was understood that the schools were segregated, it was understood that you could have good friends, but



for some reason, people didn't go in the same house. They wouldn't come in your house, and they didn't let you come in their house, and that always bothered me. If you like me -- how can you dislike me, you don't know me. And what I have found out -- I'm not saying that integration has been all that it was cut out to be, but I am saying we learn to know other people of other ethnic backgrounds. We learn other people's culture.

**APPENDIX VII**  
**PUBLIC INTERPRETATION**

## ARCHEOLOGY AND YOUR SCHOOL:

### An interdisciplinary activity for English, History, Mathematics, and the Visual Arts

Objectives for this activity: Students will:

1. Generate research oriented questions.
2. Identify and engage in activities designed to answer research questions, specifically:
  - a. Collect background information about the history of the school and the students in it.
  - b. Identify significant locations within the school, as well as characteristic artifacts associated with each location.
  - c. "Collect" information by drawing and photographing.
3. Utilize collected data to answer questions posed at the onset of the activity.
4. Report on research results, using visual, oral, and written media.

Method:

1. Ask students to imagine themselves as archeologists or historians one hundred years in the future who have been hired to investigate the \_\_\_\_\_ School Site. Have students define some questions that people one hundred years from now might want to find out about.
2. Brainstorm with the class to establish directions for research by asking:
  - a. What kind of information would you expect to find at the site of the school itself [Structure and Artifacts]?
  - b. What kind of information could you acquire about the school from other sources? Students should identify both possible sources, and the types of information to be gained from each source.
  - c. How would you go about collecting this information?
3. Divide students into three teams. Make the following assignments for each team:
  - a. Team 1: Find out the background of the school. Interview the principal, older teachers, fellow students, former students, custodians, and anyone else who remembers the school in its earlier years.
  - b. Team 2: Find out about the structure of this school. Draw a map of the school plan, measuring and labeling distances, or drawing the plan to scale. The landscape surrounding the building also should be mapped and photographed.
  - c. Team 3: Collect artifacts by photographing them. Artifacts selected should be items that play significant roles in various activities around the school. Note carefully where each artifact (photo) came from.
4. Write a report on what they have found. Combine the three team reports into one large "archeological report." The entire class then can compose a summary that explains what life was like at \_\_\_\_\_ School in 1990. These reports can be used by the teacher to evaluate students' understanding of the lesson.
5. Extension of activity: The class can prepare a "museum" display for the entire school and community. Maps and photographs, carefully labeled, can serve as the focus for the exhibit. A museum "brochure" to hand to visitors can include some of the anecdotal background documentation that students discovered through their interviews.

## INTRODUCTION TO MATERIAL CULTURE AND ARCHEOLOGY

The primary objective of this brief classroom activity is to introduce students to the basic idea behind the discipline of archeology: that the goods that humans make and have transmit messages about their makers and their owners. The activity transmits that message by utilizing students and their own possessions as models. The activity can also be used to generate brief writing assignments, in which students generate hypotheses and support them with evidence they have gathered.

Materials needed: 5" x 8" index card for each student in the class

Time needed: approximately 20 minutes for student preparation of activity; 10 minutes for student analysis of cards; 30 minutes for discussion. Follow-up writing time at teacher's option.

- Procedure:
1. Give each student a blank card. Instruct each student to write on his cards a list of the ten items that he/she considers to be his/her most prized possessions. Instruct students not to place their names on the cards, but to identify their own card with a personal sign.
  2. Collect cards from students. Then redistribute the cards around the class, making sure that no student has his/her own card.
  3. Instruct students to turn over the card they received, and to write a "Dear Sir" letter. This letter should be a brief analysis of what kind of person owns the items listed on the front of the card. Students can make comments about age, types of activities that the "owner" is interested in, whether the student is male or female, and other analytical types of assumptions. Caution students that their analyses should be based only on the items listed, and on no other data. Student "analysts" should not sign their names.
  4. When students have finished their "analyses," recollect the cards and return each to its original owner, and permit students to read descriptions of themselves.

Follow-up: Ask students to discuss (or, alternatively, to write) about the accuracy of the analyses they were able to generate using this data. The main point of these questions is to get students to think about the advantages and limitations of material data, and to think about ways to find out about people. Some leading questions might include:

- Was the description that came back on your card an accurate portrait of the kind of person that you are? Why or why not?
- (For the "analysts") Was it easy or difficult to figure out things about your individual, based upon the data you were given? What kinds of information would have made your job of analysis easier? Where could you obtain the kind of supporting information that would have permitted you to do a better, more accurate analysis?

## REVERSE DIG:

### A strategy to develop history, logic, and spatial relations skills using archeological resources

Objective: Students will visually and verbally demonstrate an understanding of the concept of stratigraphy, and its relationship to the concepts of chronology and human behavior.

Materials needed:

- five aquaria
- several varieties of soil or sand
- a collection of small contemporary artifacts representing different daily activities of youth (e. g., food consumption and preparation, gardening, play and recreation, school, etc.)

Teacher preparation: Read several archeological reports from journals such as the Quarterly Bulletin of the Archeological Society of Virginia, or popular journals such as National Geographic. Pay particular attention to descriptions of stratigraphy.

Method:

1. Divide the class into five teams. Assign each team the task of writing a story entitled "A Day in the Life of . . ." (a fictional person). Students should develop the story hour-by-hour. For each hour's activities, students should also identify several small common objects that accompany the hour's activities.
2. During a class discussion, introduce the principle of stratigraphy to students (e. g., deeper levels (of layers) and their artifacts represent earlier time periods). Use slides of sites or site drawings to illustrate this concept.
3. Provide each team with an aquarium, and several bags of differently colored sands or soils. Challenge each team to reconstruct the "day" they have made up, burying the objects in sands or soils to represent the various phases of the "day".
4. Each team must explain its stratigraphy to other teams in the class.
5. If you wish to extend this activity, direct students to exchange aquaria and excavate the aquaria by layers. Student teams can then write an explanation of what they found. This explanation should reconstruct the "day" of the person whose aquarium the team has excavated.
6. Alternatively, strategies four and five can be combined. Each team explains to one other team. Then each team tries to excavate/explain an "unknown" aquarium.

## A GOTT'S COURT PUZZLE

Directions for solving this puzzle: Below you will find ten questions about the history of Gott's Court, its former residents, and the archeologists who are working there now. For each of the questions, there is a one-word answer that you can find in the printed material you have been given at the site. Fill in the answer for each question in the column to the left. Use one letter for each space. After you have filled in all the blanks, use the letter circled in each word to fill in the big blanks at the bottom of the page. The letters at the bottom of the page will spell out the name of a **science that helps us to discover what happened in the past.**

### QUESTIONS

1. Who were probably the first people to live on or visit the land on which Gott's Court stands?
2. What do archeologists call the different layers that they find in the ground?
3. Broken dishes, glass, toys, and tools: what is the name that archeologists give to all of these clues to the past?
4. What was the first name of the signer of the Declaration of Independence who also owned Gott's Court in the 1700s?
5. What general name do archeologists give the underground walls, fences, or walkways that they find?
6. What kind of business was established in Archibold Golder's old house?
7. Shovels, notebooks, pencils, trowels, and probes are all \_\_\_\_\_ used by archeologists.
8. What was the name of the person who built and rented the row houses on the Court in the early twentieth century?
9. In what city was Dr. Kilmer's Kidney Medicine made?
10. How many families lived in Gott's Court according to the 1910 Census?

### ANSWERS

1. \_\_\_\_\_ **O** \_\_\_\_\_
2. \_\_\_\_\_ **O** \_\_\_\_\_
3. \_\_\_\_\_ \_\_\_\_\_ **O** \_\_\_\_\_
4. \_\_\_\_\_ **O** \_\_\_\_\_
5. \_\_\_\_\_ **O** \_\_\_\_\_
6. \_\_\_\_\_ **O** \_\_\_\_\_
7. \_\_\_\_\_ \_\_\_\_\_ **O** \_\_\_\_\_
8. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ **O** \_\_\_\_\_
9. \_\_\_\_\_ \_\_\_\_\_ **O** \_\_\_\_\_
10. \_\_\_\_\_ \_\_\_\_\_ **O** \_\_\_\_\_

The name of the science that helps us discover how people lived in the past is:

\_\_\_\_\_

## Archeology at Gott's Court:

### DETECTIVES IN THE DIRT

Most people, when asked to find out some information, go to the library. But, not every historical question can be answered by reading books. Think of things you might want to know about the people who lived at Gott's Court in the past. What kinds of food did they eat? Did their children have toys to play with? What other kinds of buildings stood on the property, and when? Archeology, both above and below the ground, can sometimes answer such questions.

Archeologists are like detectives. They carefully collect all types of evidence, using many different kinds of tools. Some of the tools, like shovels, are familiar to most people. Others, like line levels and probes, are a little strange. The most important tool for an archeologist is his notebook and pencil, because he must carefully keep track of every little clue he finds. How many tools did you see the archeologists using at the Gott's Court site?

Archeologists try never to forget even the smallest clues. For example, there are **artifacts**--things which people made and used in their daily lives. Artifacts can include the toys that children played with in the past, the tools used on the farm and in the making of leather goods, the dishes and pots used to cook and serve meals, or the nails, window panes, and hinges that helped to hold a building together.

People in the past also built all kinds of structures with foundation walls. They dug holes for wells, or installed fences. They laid out walkways between their

buildings. The walls, pits, walkways, and fences that people built long ago are known as **features**, and archeologists also look for them.

Even the dirt itself, composed of different layers called **strata**, can hold clues for archeologists. For example, if a building burned, a layer of ashes or broken bricks may be mixed into the ground that archeologists dig up. Stable yards where cows and horses were fenced in contain certain chemicals that special archeologists can identify by testing the soil.

Archeologists have been working at Gott's Court for several weeks now. So far, they have found features and artifacts that belong to both of the time periods during which people lived on the site. They have located the remains of the foundations on which the houses stood, and lines of holes in the ground where fences may have stood. The artifacts from the twentieth century have included old broken dishes, nails, animal bones, and bottles. The artifacts of the 1700s are somewhat different; these have included parts of smoking pipes, bricks, and cuff links..

The detectives in the dirt still have more work to do. They need to dig some more, and then they have to fit all the pieces of the puzzle together like a detective to figure out what actually happened. The hints that they discover as they carefully dig away the dirt will tell them even more about the history of the people who used to live at Gott's Court.

GOTT'S COURT IN ANNAPOLIS:  
FROM TAVERN TO TOWNHOUSES

**SAMPLE BOTTLE  
DR KILMER'S  
SWAMP ROOT KIDNEY REMEDY  
BINGHAMPTON NY**

Although it's probably true that pre-historic Indians stopped on the hill near the center of Annapolis thousands of years ago, the small piece of land known as Gott's Court only received its name in the early twentieth century. The property was named after Mr. Winson Gott, who bought the land in about 1907.

The first, and perhaps most famous, owner of this land was Charles Carroll, also known as "The Settler." To our knowledge, the first Mr. Carroll never built any buildings here at all. His son Charles, who also was known as "The Signer" because he signed the Declaration of Independence, sold the land to the Golder family. Mr. John Golder died soon after the sale, but his son Archibold built several structures on the land. These included a two-story wooden house, a kitchen, an outhouse, a stable, and a warehouse. Most likely, some of these structures were in the back yard of the house, at about the same place where the digging is going on right now.

At the end of the 1700s, Archibold Golder's dwelling house was turned into a tavern called the "Sign of the Pennsylvania Farmer." During the century that followed, the old building

served a variety of uses, and went under a number of different names. Until about 1835, it was called the Hunter Tavern; after the Civil War, it was known as the Western Hotel. In back of the hotel, there stood a stable that could house up to 30 horses; there also was a kitchen garden that probably grew food for the meals served by the hotel.

Then in about 1907, Mr. Winson Gott bought just the backyard section of the tavern. He decided to build some houses on this land, and then rent them to tenants. Three years later, the U. S. government took a count (or census) of all the people in the United States. When the census taker came to Gott's Court, he found about 24 families (over 100 people) living in those houses. All of the residents of Gott's Court were African-Americans; all of the adults worked, even the women. In fact, about half of the families had a woman listed as the head of the household.

The old houses of Gott's Court were taken down in about 1950. But we can still find traces of them, and the things their residents used and discarded, by scientifically and carefully digging for them. That's what the Gott's Court project is all about.



## TOOLS AND THE ARCHEOLOGIST: AN EXERCISE IN OBSERVATION

**HOW OBSERVANT ARE YOU?** THIS LITTLE CHECKLIST WILL HELP YOU SHARPEN YOUR SKILLS IN OBSERVATION, A SKILL THAT IS VERY IMPORTANT TO ARCHEOLOGISTS.

The list in the middle column below presents ten tools or combinations of tools that archeologists often use as they go about their detective work. In the column to the left of each tool listed on the page, make a check mark in the blank before each tool that you see being used on the site at Gott's Court. In the right-hand column, after each tool, write how and why that tool was being used by the archeologists. Use the extra blanks to list additional tools that you see. If you don't know the name of a tool being used, or if you cannot figure out an answer, ask one of the archeologists!

I SAW. . .	THIS TOOL. . .	BEING USED FOR. . .
_____	trowel	_____
_____	whisk broom	_____
_____	screen	_____
_____	shovel	_____
_____	probe	_____
_____	paper bags/magic markers	_____
_____	notebook/pen or pencil	_____
_____	folding ruler/tape measure	_____
_____	string and nails	_____
_____	line level	_____
_____	_____	_____
_____	_____	_____

For safety reasons, the current excavations at Gott's Court are not open to the public. However, two public Interpretation events have been scheduled at later dates. We hope that you will visit us at that time.

Friday, November 15, 1991  
9 A.M. - 3 P.M.

PUBLIC OPEN HOUSE AT THE SITE

Tuesday, November 12 - Thursday, November 14  
11:30 A.M. - 1 P.M.

LUNCH HOUR SITE TOURS

Prepared for  
Department of Public Works  
City of Annapolis, Maryland

by

R. Christopher Goodwin & Associates, Inc.

337 East Third Street  
Frederick, Maryland 21701



## GOTT'S COURT

From Tavern to Townhouse: Archeology and History of an Annapolis Back Lot



Within a block of historic St. Anne's Church in Annapolis a unique chapter of Annapolis history is buried. Today, pedestrians walking along West Street see stylish boutiques, art galleries, charming courtyards, and dignified restored office suites. The imposing Arundel Center that houses the main offices of the Anne Arundel County government dominates the corner of Northwest and Calvert Streets. Inside Gott's Court, in the triangle bounded by West, Calvert, and Northwest Streets, the automobiles of county employees are parked upon a barren surface of macadam and concrete.

Viewing this scene today, it is difficult to picture the court as it was in the past. Less than a century ago, nearly one hundred African-American Annapolitans pursued the myriad tasks of their daily lives in the cramped confines of this small triangle of urban space. A century earlier, passers-by on West Street would have observed the employees of a tavern as they groomed and fed the mounts of the establishment's customers, or weeded the tavern's kitchen garden.

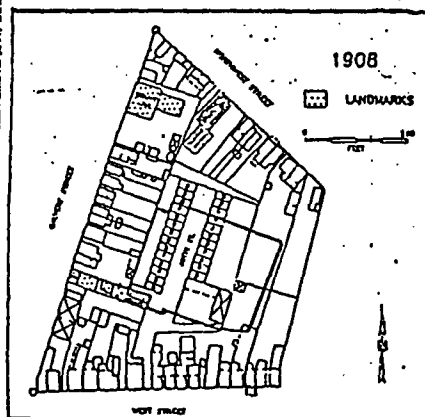
Archeological excavations currently underway at the Gott's Court site are designed to recover the material remains of over two hundred years of occupation on this urban lot.

### A Brief History of the Gott's Court Site

In the early eighteenth century, the block encompassing Gott's Court lay on the western fringe of Annapolis City. Calvert Street was the city's western boundary, West Street was a country road known as Cowpens Lane, and the city gates were located at the intersection of West and Calvert Streets.

However, the five town lots in this block quickly were developed as residential and commercial properties. For example, Archibald Golder built a two-story frame dwelling and several outbuildings on his parcel during the mid-eighteenth century. In 1799, Gottlieb Grammar opened a tavern, known as the "Sign of the Pennsylvania Farmer," in this structure, which still stands at 40-50 West Street.

The building was operated as a hotel during most of the nineteenth century. The hotel's back lot, including most of the present project area, reportedly had a large stable and garden yard. During this same period, residences lined Northwest Street, and a central jail for Anne Arundel County was built at the corner of Northwest and Calvert Streets. The hotel's back lot abutted property lines of these residences and of the jail.



After the Civil War, West Street gradually became a street lined with small businesses, private dwellings, and boarding houses. Across Calvert Street, the depot of the Annapolis and Elkridge Railroad brought increasing traffic volume to this business area. The function of the old hotel changed, as its ground floor was subdivided to accommodate an ice cream saloon, a barber shop, and a grocery store. Except for a few scattered sheds, the interior of the block remained vacant space.

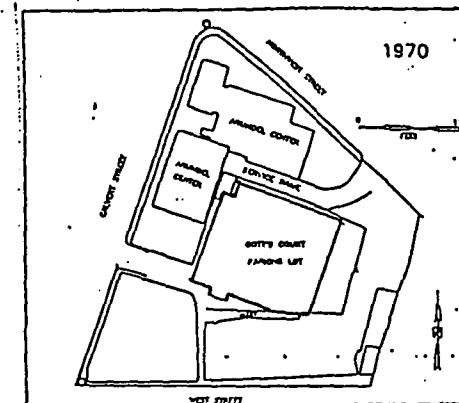
By the turn of the twentieth century, developmental pressures increased, and vacant land in what was now central Annapolis, increased in value. The former tavern garden and stable yard became a prime target for intensive development.

Initial plans for housing in Gott's Court depicted a single tier of row houses, each approximately 20 feet wide, and each with a relatively spacious back yard. But the plans were redrawn when the parcel changed hands. When complete, Gott's Court consisted of two facing tiers of frame row houses; access to the court was through an alley running north from West Street. Each house had a tiny rear yard enclosed with a board fence; a small outdoor shed, possibly a privy, was located at the rear of each yard. According to the Census of 1910, 22 African American families, over half of which were headed by women, lived in the houses on Gott's Court.

Gott's Court was occupied until after World War II. The construction of the Arundel Center and other urban renewal projects of the mid-twentieth century led to the demise of this formerly busy and densely populated section of downtown Annapolis as a residential area.

### The Gott's Court Archeological Project

The Gott's Court Archeological Projects began in the library, with an examination of primary and secondary historical sources. Information about Annapolis history and about Gott's Court was obtained from the Maryland Hall of Records and the Maryland Historical Society.



Reports about research previously conducted in the area were obtained from the Maryland Historical Trust, Archaeology in Annapolis, and Historic Annapolis, Inc. Historic maps and photographs of the project area were located at the Library of Congress, at the National Archives, and at the Maryland Hall of Records.

Computer digitization of these maps, using a Geographic Information System, permitted the creation of map overlays similar to those pictured on these pages. These overlays accurately depicted where archeological features associated with Gott's Court and earlier structures might be located. With the assistance of these maps, preliminary test trenches were placed across the present parking lot. These test trenches represented the first phase of the Gott's Court archeological study.

When the artifacts obtained from these units are analyzed, and all of the features are mapped, the second phase of the investigation can begin. This stage of the project, which will involve the manual excavation of between 15 and 25 archeological test units, is expected to be complete by late November.

When complete, the Gott's Court archeological project will provide new data about the lifestyles not only of the earliest residents of Annapolis City, but also those more recent Annapolitans who formed a significant segment of the town's population.

intensive, phase of the Gott's Court Investigation. This stage of the project involves the manual excavation of between 15 and 25 test units, and will be completed in late November, 1991. Although the excavations and the analysis of the recovered artifacts are incomplete at the present time, the study already has begun to provide insights into the history and residents of the Gott's Court block.

For example, there were two distinct phases of activity within this block. The first took place between the mid-eighteenth century and the first quarter of the nineteenth century. The artifacts from this period include many fragments of fine ceramics imported from England and the Far East; large quantities of bone; and interesting personal items such as wig curlers and an engraved pewter cuff link bearing the initials "J.G." (pictured below). These early artifacts are representative of the more affluent early occupants of the property, such as John and Archibold Golder.



The second phase of occupation on the property is associated with the twentieth century African-American residents of Gott's Court. The architectural remains of these dwellings, the fence lines and subdivisions of their back yards, and many items discarded by their residents present interesting contrasts with the earlier eighteenth century material. The fact that the houses apparently had no basements and were built on brick piers suggests that

they were relatively light-weight frame structures. The ceramics recovered from these later deposits show that the occupants of the project area satisfied many of their needs by buying relatively inexpensive mass-produced items. Beverage, pharmaceutical, condiment, and perfume bottles indicate that the city of Baltimore and other domestic sources (see below), rather than foreign sources, supplied the needs of the residents of twentieth century Annapolis.

**SAMPLE BOTTLE  
DR KILMER'S  
SWAMP ROOT KIDNEY REMEDY  
BINGHAMPTON NY**

When the artifacts and features revealed during these investigations are analyzed, the final report will add yet another page to the constantly growing book of knowledge about the history of Annapolis and its many citizens.

Prepared for

Department of Central Services  
City of Annapolis, Maryland

by

R. Christopher Goodwin & Associates, Inc.  
337 East Third Street  
Frederick, Maryland

## GOTT'S COURT

From Tavern to Townhouse: Archeology and History  
on an Annapolis Back Lot



Hidden under the city blocks surrounding the historic St. Anne's Church lie tangible remains of years of Annapolis history. Stylish boutiques, art galleries, charming courtyards, and dignified restored office suites that today line West and Northwest Streets often obscure those traces of Annapolis' earlier years. The imposing block of the Anne Arundel County Government Center dominates the landscape at the corner of Northwest and Calvert Streets. Until recently, only automobiles occupied the barren surface of macadam and concrete within the interior of the block bounded by West, Northwest, and Calvert Streets.

However, less than a century ago, nearly one hundred African-American Annapolitans pursued their daily lives within the cramped confines of this small triangle of inner urban space, then known as Gott's Court. Earlier still, within that same space, the employees of the Hunter Tavern groomed and fed the mounts of the establishment's customers, or weeded the tavern's kitchen garden.

Now, as the modern surface layers are painstakingly peeled away, archeologists are revealing the cultural remains of over two centuries of activity on this lot. The features and artifacts they are finding bring to life the past of this small inner urban space.

### The Gott's Court Site In Annapolis History

During the early eighteenth century, the block surrounding Gott's Court was the western fringe of the City of Annapolis. Calvert Street was the city's western boundary. West Street was a country road known as Cowpens Lane, and the city gates were located near the intersection of West and Calvert Streets. Charles Carroll, known as "The Settler," owned the five large lots which made up this block.

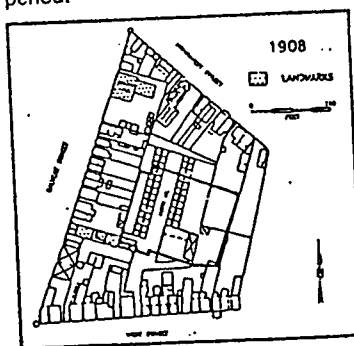
However, Carroll's son, Charles Carroll of Carrollton, sold portions of these five lots during the middle and late eighteenth century; the buyers quickly developed their properties for residential and commercial purposes. One early occupant was John Golder. By the end of the eighteenth century, members of the Golder family apparently constructed a two-story frame dwelling, a kitchen, an outhouse, a stable, and a warehouse on one of these lots. In 1799, Gottlieb Grammar opened a tavern known as the "Sign of the Pennsylvania Farmer" in the frame dwelling, which still stands at 40-50 West Street.

The building and its adjoining one-acre lot was operated as a hotel during the remainder of the nineteenth century. The hotel's back lot, including most of the present project area, reportedly housed a garden and a stable capable of accommodating 30 horses. During this same period, residences lined Northwest Street, and the Anne Arundel County prison was built at the corner of Northwest and Calvert Streets. The hotel's back lot abutted property lines of these residences and of the jail.

After the Civil War, both the nature of the activities within the project block, and the ethnic composition of the block's residents, underwent some changes. The population of the project block was composed increasingly of African-Americans. The African-American community,

segregated after the Civil War, established its own social institutions in the neighborhood, including St. Philip's Episcopal Church on Northwest Street. Across Calvert Street, the depot of the Annapolis and Elkridge Railroad increased traffic volume into this commercial area. Small businesses, private dwellings, and boarding houses lined West Street. The function of the old hotel was changed, and its ground floor was subdivided to accommodate an ice cream saloon, a barber shop, and a grocery store. Except for a few scattered sheds, the interior of the block remained vacant.

However, by the turn of the twentieth century, developmental pressures increased, and the value of scarce vacant land in what was now central Annapolis rose. The former tavern garden and stable yard became a prime target for intensive development. Winson G. Gott began the construction of the Gott's Court residences during this period.



Initial development plans for Gott's Court called for the construction of a single row of houses, each approximately 20 feet wide. However, these plans apparently were revised when Winson Gott acquired the property. When completed, Gott's Court consisted of two facing tiers of row houses; access to the court was gained

through an alley running north from West Street. Each frame house had a tiny rear yard enclosed with a board fence; a small outdoor shed was located at the rear of each yard. According to the Census of 1910, 24 African-American families, over half of which were headed by women, lived in the 25 houses on Gott's Court.

Gott's Court was occupied until after the Second World War. The construction of the Arundel Center and other urban renewal projects of the mid-twentieth century led to the demise of this formerly busy and densely populated section of downtown Annapolis.

### The Gott's Court Archeological Project

The Gott's Court Archeological Project has entailed research both in the library and in the field. A wealth of historical data, both primary and secondary, exists about Annapolis history in general and about Gott's Court in particular. The archival research effort tapped many sources, including the Maryland Hall of Records, the Maryland Historical Society, the Maryland Historical Trust, Archaeology in Annapolis, and Historic Annapolis, Inc. Old maps and photographs of the project area were obtained from the Library of Congress, the National Archives, and the Maryland Hall of Records.

Computer digitization of these maps, using a Geographic Information System, permitted the creation of map overlays similar to that pictured in the preceding column. These overlays accurately depicted where, within the proposed area of construction, archeological features associated both with Gott's Court and earlier structures might be located. With the assistance of these maps, preliminary test trenches, excavated by means of a backhoe, were placed across the present parking lot. The excavation of these test trenches, and the subsequent analysis of the data obtained from them, represented the first phase of the Gott's Court archeological study.

The current excavations represent the second, more

**APPENDIX VIII**  
**RESUMES OF KEY PROJECT PERSONNEL**

**R. CHRISTOPHER GOODWIN, Ph.D.**  
**PRINCIPAL INVESTIGATOR**

Dr. R. Christopher Goodwin, Ph.D., is President and Director of Research of R. Christopher Goodwin & Associates, Inc. A native of the Washington Metropolitan area, he is a former Yale Peabody Museum (1976) and Smithsonian Institution (1979-1980) Research Fellow.

Dr. Goodwin is recognized as one of the nation's leading experts in cultural resource management. He has been a contractor to the U.S. Army Corps of Engineers (Baltimore, Memphis, New Orleans, Pittsburgh, Savannah, and Vicksburg Districts) on numerous projects. During the past ten years, he has served as Principal Investigator for major cultural resource investigations conducted by his firm within the Baltimore-Washington Metropolitan area. These projects have included such large-scale efforts as the architectural and archeological investigation at Baltimore's Oriole Park at Camden Yards stadium site; the archeological assessment of the Bachelor's Hope Farm in St. Mary's County, Maryland; Phase III data recovery projects at three Archaic period sites at Russett in Anne Arundel County, Maryland; and, Phase II and III investigations of the Signal Hill/Bobby/Doll tracts, sites of a portion of the Confederate Winter encampment of 1861-62, in Prince William County, Virginia.

Dr. Goodwin's expertise also has been called upon for historic preservation planning projects, and for industrial and governmental agency compliance with federal and state laws and regulations governing archeological and historic sites. He has served as Principal Investigator on preservation and compliance projects for the National Capital, Southeast, and Southwest regions of the National Park Service (NPS); the Department of Energy (DOE); Her Majesty's Service, U.K.; the Louisiana Division of Archaeology; major utility companies, including Allegheny Power, ENRON, Texaco, Southern Natural Gas (SONAT), Baltimore Gas and Electric Company, and Peabody Coal; the U.S. Fish and Wildlife Service, Northeast Region; the City of Annapolis; and, the Maryland Historical Trust. The geographic range of research and compliance projects completed under Goodwin's direction encompasses Maryland, Pennsylvania, West Virginia, Illinois, Virginia, Arkansas, Florida, Georgia, Louisiana, Texas, and Puerto Rico. Dr. Goodwin has published widely in the fields of both prehistoric and historic archeology. His areas of particular expertise include cultural resource management, cultural ecology, prehistoric demography, field methods in archeology, human osteology, and historic archeology. He is a court-qualified expert in both historic archeology and in cultural resource management. In addition to numerous technical reports and monographs, Dr. Goodwin has contributed articles to numerous scholarly journals, including American Anthropologist, American Antiquity, the Florida Anthropologist, and American Scientist. Dr. Goodwin is listed in *Who's Who* in Leading American Executives.

**SUZANNE L. SANDERS, M.A.**  
**SENIOR PROJECT MANAGER**

Ms. Suzanne Sanders, M.A., Senior Project Manager, received her Bachelor of Arts degree from SUNY-Binghamton in 1984, and her M.A. in Historical Archeology from the College of William and Mary in Virginia in 1988. Ms. Sanders' M.A. thesis focused on vernacular architecture (standing structures); hence, her graduate training was at the interface of archeology and architecture. In addition to field experience in Maryland, Virginia, New Jersey, and New York State, Ms. Sanders has worked on historic sites in the West Indies. She has had experience with historic sites ranging from the mid-seventeenth century to the twentieth century. Her field work spans the range from Phase I surveys through Phase III data recovery projects. Ms. Sanders also had four years of experience instructing archeological field schools for the College of William and Mary.

Since joining Goodwin and Associates, Inc., Ms. Sanders has been principal field supervisor for numerous projects, including the Phase I archeological investigation of the Camden Yards Stadium Site in Baltimore, Maryland; the Phase I archeological investigation and architectural recordation of the structures at the Yachting Center complex on Baltimore's waterfront; the Phase II investigation of the Drane House in Accident, Maryland; Phase II and III studies of the Civil War era Signal Hill project area in Manassas, Virginia; the mid-eighteenth century Bachelor's Hope Farm in St. Mary's County, Maryland; at the Shaw and 14th Street urban renewal areas in Washington, D.C.; and at the Icehouse Square project in Gettysburg, Pennsylvania.



## David B. Landon

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Telephone: (508) 347-5806

Date of Birth: April 23, 1963

### Education

- 1985-91 Boston University, Department of Archaeology  
Ph.D. expected May 1991. Dissertation title: Zooarchaeology and Urban Foodways: A Case Study from Eastern Massachusetts.  
Major Advisor: Dr. Mary C. Beaudry
- 1981-85 Wesleyan University  
B.A. June 1985. Major in Economics. Honors Thesis: A Preliminary Research Strategy for Historical Archaeology in the Town of Wethersfield, Connecticut.

### Field and Research Experience

- 1988-89 Project Archaeologist, Central Artery Project Phase II.
- 1986-89 Project Zooarchaeologist, Lowell Boott Mills Project.
- 1987-88 Assistant Archaeologist, Jacobs Farm Property Survey. Organized project from its inception, supervised excavations, prepared final report.
- 1987 Historical Research Assistant, Central Artery Project. Worked extensively with compilation and interpretation of cartographic materials. May-August.
- 1986 Faunal Analyst, Spencer-Pierce-Little Project.
- 1985-87 Field Crew Member (varying responsibilities) Spencer-Pierce-Little Property, Newbury, MA; Boott Mill Project, Lowell, MA; Parson Barnard House, North Andover, MA.
- 1985 Area Supervisor, St. Jean de Vigne Monastery, Soisson, France. July-August.
- 1985 Site Supervisor (with James Martin and Susan Wallace) Peltons Backlot Site, Middletown, CT. April-May.
- 1984 Excavation Director, Silas Deane House, Wethersfield, CT. April-May.
- 1981 Excavator, Magill Site, Middletown, CT. May.

### Teaching Experience

- 1987-90 Teaching Assistant, Archaeology 101: Introduction to Archaeology, Archaeology 102: Introduction to Sciences in Archaeology, and Archaeology 100: Great Discoveries in Archaeology. Boston University.
- 1989 Field School Instructor, Boston University Summer Field School at the Spencer-Pierce-Little Farm, Newbury, Massachusetts. Summer.

- 1987 Faunal Analysis Workshop, Spencer-Pierce-Little Property Excavations, Newbury, Massachusetts. June.
- 1984-85 Teaching Assistant, Anthropology 151: Introduction to Physical Anthropology and Anthropology 312: Introduction to Archaeology. Wesleyan University.
- 1984-85 Course Instructor, Introduction to Historical Archaeology. Wethersfield Historical Society. Spring of each year.

#### Awards and Honors

- 1989-90 Presidential University Teaching Fellowship, Boston University
- 1989 Council for Northeast Historical Archaeology award for best student paper
- 1988-89 Presidential University Teaching Fellowship, Boston University
- 1987-88 Presidential University Teaching Fellowship, Boston University
- Spring 1987 Presidential University Teaching Fellowship, Boston University
- 1985-86 Presidential University Graduate Fellowship, Boston University
- 1985 Honors in General Scholarship, Wesleyan University

#### Publications

- n.d. The Potential Applications of Tooth Cement Increment Analysis in Historical Archaeology. Forthcoming in *Northeast Historical Archaeology*.
- 1989 (with Stephen A. Mrozowski, Edward L. Bell, Mary C. Beaudry, and Gerald K. Kelso) Living on the Boott: health and well being in a boardinghouse population. *World Archaeology* 21(2): 298-319.
- 1989 Domestic Ideology and the Economics of Boardinghouse Keeping. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts. Volume III: The Boarding House System as a Way of Life*, ed. Mary C. Beaudry and Stephen A. Mrozowski, pp. 37-48. Cultural Resources Management Study 21. Boston: U.S. Department of the Interior, National Park Service, North Atlantic Regional Office.
- 1989 Faunal Remains from the Boott Mills Boardinghouses. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts. Volume III: The Boarding House System as a Way of Life*, ed. Mary C. Beaudry and Stephen A. Mrozowski, pp. 169-186. Cultural Resources Management Study 21. Boston: U.S. Department of the Interior, National Park Service, North Atlantic Regional Office.
- 1987 Zooarchaeological Remains from the Kirk Street Agents' House. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts. Volume II: The Kirk Street Agents' House*, ed. Mary C. Beaudry and Stephen A. Mrozowski, pp. 131-141. Cultural Resources Management Study 19. Boston: U.S. Department of the Interior, National Park Service, North Atlantic Regional Office.

- 1987 Foodways in the Lowell Boardinghouses: The Historical and Zooarchaeological Evidence. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts. Volume I: Life at the Boardinghouses: A Preliminary Report*, ed. Mary C. Beaudry and Stephen A. Mrozowski, pp. 115-137. Cultural Resources Management Study 18. Boston: U.S. Department of the Interior, National Park Service, North Atlantic Regional Office.

## Reports

- 1990 Faunal Remains from the 1980 and 1981 Excavation Seasons at Fort Christanna: Taphonomic Evidence for Site Formation Processes. Center for Archaeological Studies, Boston University.
- 1989 (with Ricardo J. Elia and Nancy S. Seasholes) Phase II Archaeological Investigations of the Central Artery/Third Harbor Tunnel Project in Boston, Massachusetts. Office of Public Archaeology, Boston University.
- 1989 A Preliminary Analysis of Faunal Material from Phase II Archaeological Investigations of the Central Artery/Third Harbor Tunnel Project in Boston, Massachusetts. In *Phase II Archaeological Investigations of the Central Artery/Third Harbor Tunnel Project in Boston, Massachusetts*, by Ricardo J. Elia, David B. Landon, and Nancy S. Seasholes, pp. 73-96. Office of Public Archaeology, Boston University.
- 1988 Intensive Archaeological Survey of the Jacobs Farm Property, Norwell, Massachusetts. Center for Archaeological Studies, Boston University.
- 1988 (with Julie Hansen, William Fisher, F. Fuliehan, Alfred Gal, Laura Gross, Leslie Mead) Little Wood Creek Botanical Remains. Center for Archaeological Studies, Boston University, Boston, Massachusetts.
- 1987 A Preliminary Analysis of Faunal Remains from the Spencer-Pierce-Little House. In *Limited Archaeological Reconnaissance of the Spencer-Pierce-Little Property, Newbury, Massachusetts*, by Mary C. Beaudry, pp. 35-41. Center for Archaeological Studies, Boston University, Boston, Massachusetts.

## Presentations

- 1990 "Zooarchaeology and Urban Foodways: A View from Boston, Massachusetts." Paper presented at the annual meeting of the Society for Historical Archaeology, Tucson, Arizona.
- 1989 "Tooth Increment Analysis: the Potential for Applications in Historical Archaeology." Paper presented at the annual meeting of the Council for Northeast Historical Archaeology, Morristown, New Jersey.
- 1989 "Documentary and Faunal Evidence for Foodways at the Boott Mill Boardinghouses." Paper presented at the Spring Meeting of the New England Historical Association, Lowell, Massachusetts.
- 1989 "Documentary and Zooarchaeological Evidence for Urban Foodways in Lowell, Massachusetts." Paper presented at the First Joint Archaeological Congress, Baltimore, Maryland.
- 1988 (with Mary C. Beaudry) "Domestic Ideology and the Boardinghouse System in Lowell, Massachusetts." Paper presented at the Dublin Seminar for New England Folklife, Durham, New Hampshire.

- 1987 "Faunal and Floral Remains from a Seventeenth-Century Feature from the Wilkinson Site, Downtown Boston." Paper presented at the Jamestown Archaeological Conference.
- 1987 (with Edward L. Bell and Lorinda B. Rodenhiser) "Data for the Study of Consumer Behavior/Socio-Economic Status from Lowell, Massachusetts." Ms. report for the Urban Archaeology Group Workshop on Urban Archaeology, Society for Historical Archaeology Meetings, Savannah, Georgia.

#### Memberships in Professional Societies

Society for Historical Archaeology  
Council for Northeast Historical Archaeology  
Society for Industrial Archaeology  
American Anthropological Association  
Society for American Archaeology

#### References

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Dr. Diana Crader  
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University of Southern Maine  
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**MICHELLE T. MORAN, B.A.**  
**ARCHIVIST**

Ms. Michelle T. Moran, Archivist/Historian, is a graduate Cum Laude with honors in History from Loyola University. A Presidential Scholar for four years at Loyola University, Moran served as Vice President of the Phi Alpha Theta history honors society, as coeditor of the Loyola Student Historical Journal, and as Editor in Chief of the Loyola Maroon, that University's nationally award-winning weekly. Besides her background in history, Ms. Moran worked for the U. S. Army Corps of Engineers, St. Louis District, Planning Division, Environmental Analysis Branch as a researcher and data management technician.

Since joining Goodwin & Associates, Inc., in 1989, Ms. Moran has served as principal research historian for many major archeological projects. These have included: Phase II investigation in Wyoming Valley, Pennsylvania; the Drane House project in Accident, Maryland; the Charles County Landfill Project in LaPlata, Maryland; the Phase I and II investigations of sites in the Shaw and 14th Street Urban Renewal areas in Washington, D.C. She also has provided historical background documentation for several architectural recordation projects including the McMurray Farmstead in Frederick, Maryland; the evaluation of Architectural Resources on the proposed Washington National Airport Radar Facility in Anacostia; and of the Humphrey Wolfe Farm in Howard County, Maryland.

MARTHA R. WILLIAMS, M.A., M.ED.  
HISTORIC SITE SPECIALIST

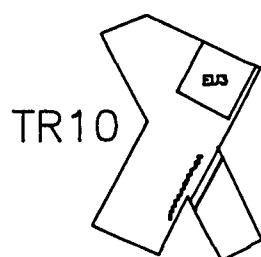
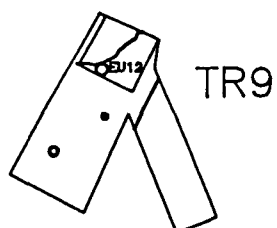
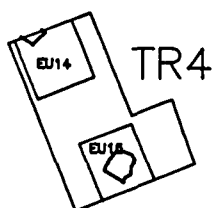
Ms. Martha R. Williams, a graduate of Lebanon Valley College, holds advanced degrees in Education from the University of Pennsylvania and in Applied History from George Mason University. Her extensive experience in education, cultural resource management, and historical archeology includes a field school at Colonial Williamsburg (1972), employment with the National Park Service as an archeological laboratory technician, and appointment as a field archeologist for the 1991 excavations at Fort Raleigh, North Carolina. As co-director of the Fairfax County High School Seminars in Historical Archaeology (1973-1987), she managed 15 archeological projects, ranging from Phase I reconnaissance studies to Phase III data recovery efforts. In 1987, she co-authored the Heritage Resources Management Plan for Fairfax County, Virginia.

Since joining Goodwin & Associates, Inc., Ms. Williams has served as historian, project manager, and public interpretation specialist for numerous studies conducted by the firm. She has co-authored reports for projects in Anne Arundel, Charles, Frederick, Harford, St. Mary's, Talbot, and Washington Counties, and Baltimore City in Maryland; and in Arlington, Fairfax, Halifax, and Prince William Counties in Virginia. As public interpretation specialist, she has designed and executed successful public information activities in connection with the company's Stadium Project in Baltimore; the Drane House project in Garrett County, Maryland; the Icehouse Square project in Gettysburg, Pennsylvania; at the Gott's Court site in Annapolis, Maryland; and at Pemberton Plantation in Salisbury, Maryland.

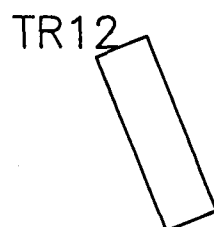
Ms. Williams also is actively involved with professional preservation organizations. She has served as Vice-President of the Archeological Society of Virginia, and as chair of that organization's Education Committee; she currently sits on the ASV Board of Directors. She has written for numerous publications, including the *Yearbook* of the Historical Society of Fairfax County, *Museum News, Interpretation* (NPS), and the *Quarterly Bulletin* of the Archeological Society of Virginia. In 1991, she received a Distinguished Service Award for the Fairfax County History Commission, and was recognized in 1992 by the Society for Historical Archaeology for her two-year service as Chair of that organization's Committee on Public Education.

**FIGURE 7**

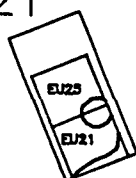
NORTHWEST  
STREET



TR5



TR21



TR11





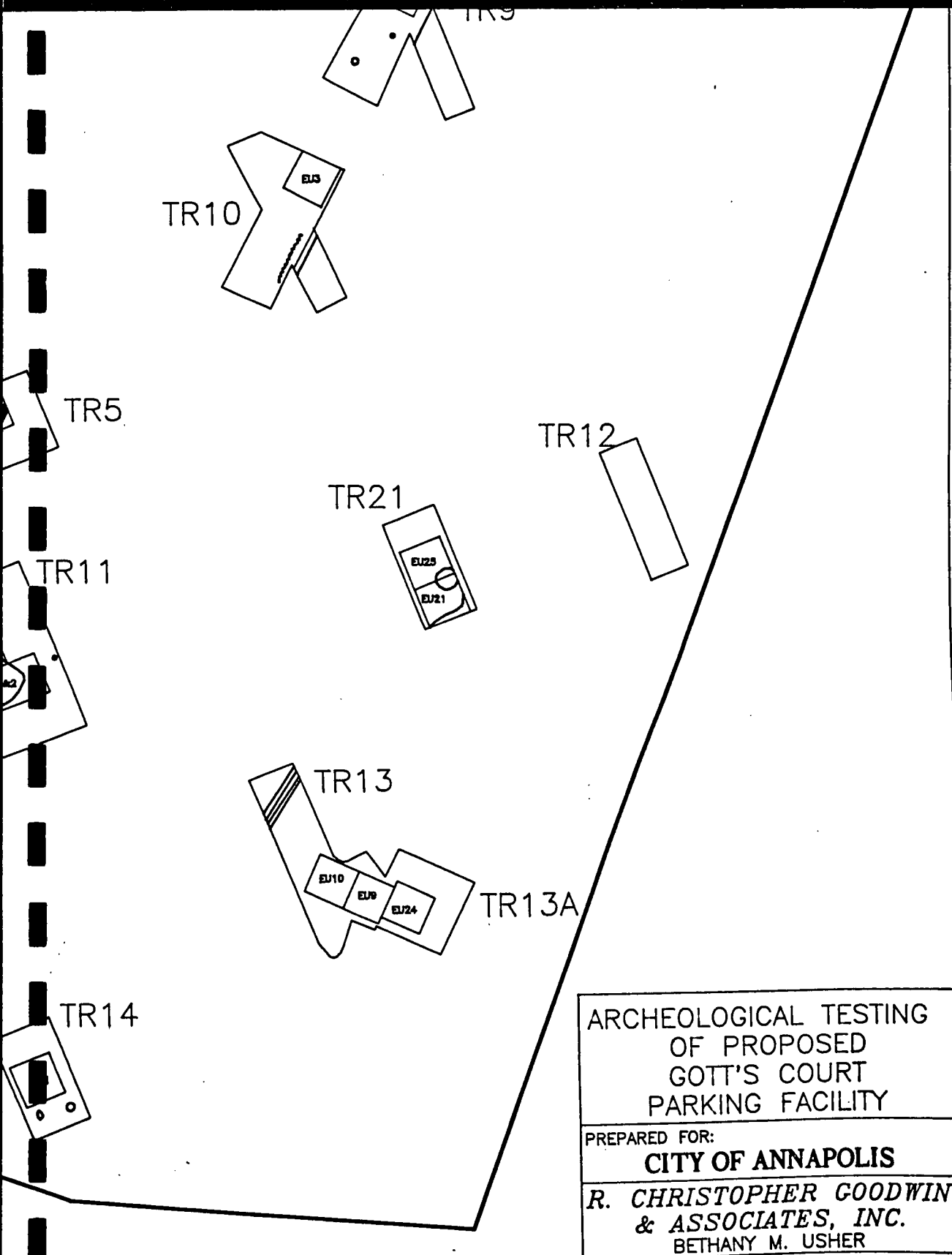


Figure 7. Site plan of the Gott's Court project area, showing the location of trenches and excavation units.

ARUNDEL  
CENTER

TR16

TR17

TR1

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TR2

TR15

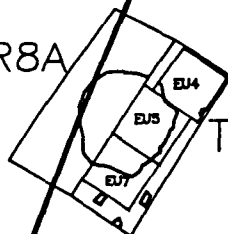
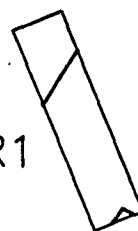
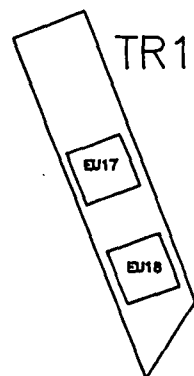
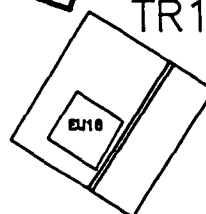
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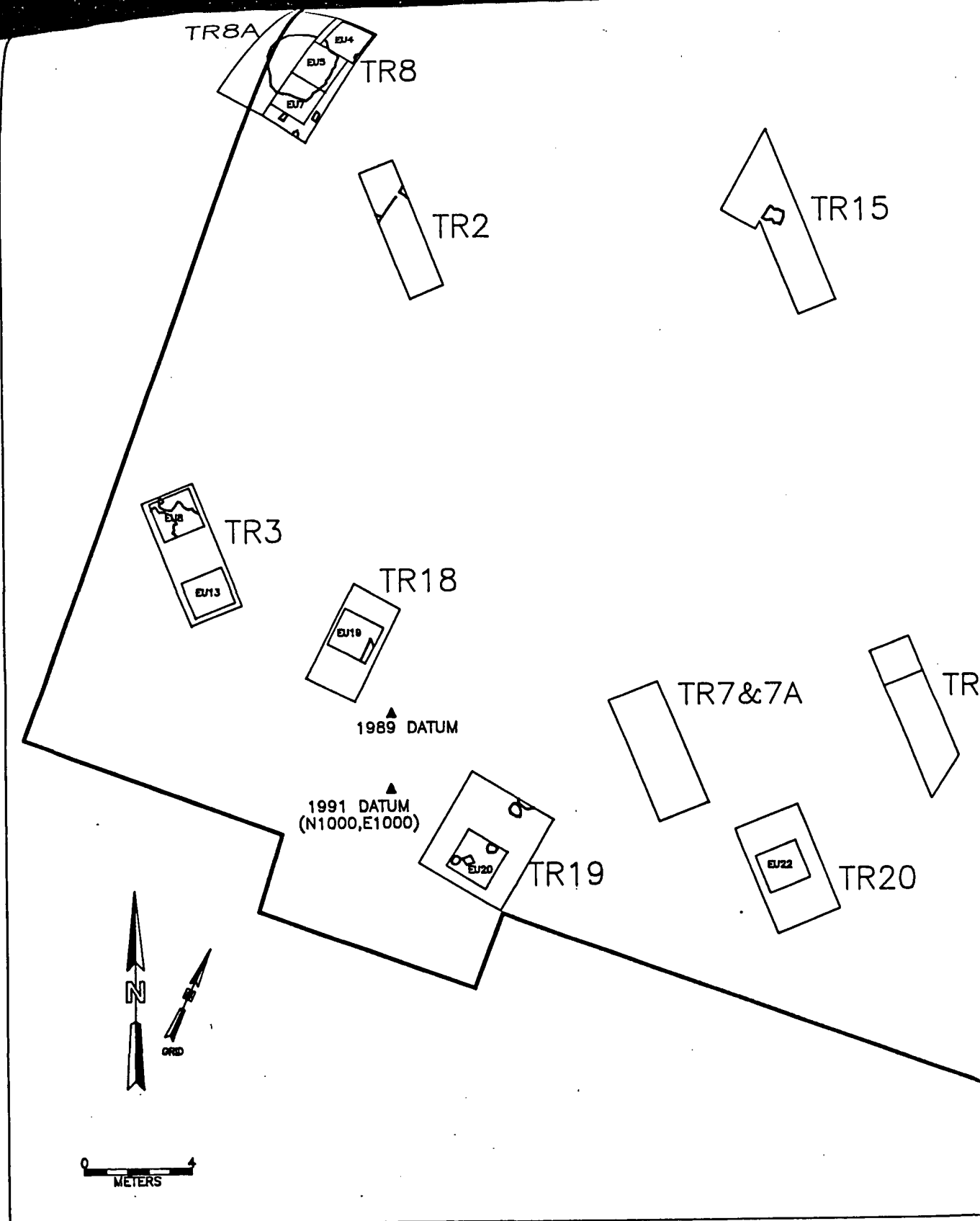
TR18

1989 DATUM

TR7&7A

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August 12, 1993

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**PHASE II/III ARCHEOLOGICAL INVESTIGATIONS  
OF THE GOTT'S COURT PARKING FACILITY,  
ANNAPOLIS, MARYLAND**

**FINAL REPORT**

**R. Christopher Goodwin & Associates, Inc.  
337 East Third Street  
Frederick, Maryland 21701**

